RETRO GAMER*

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OLD!

# RETRO* GAMER

ISSUE THREE

RETRO GAMER* ISSUE THREE
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03>




>SYNTAX ERROR!

>MISSING COVERDISC?

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RETRO* GAMER

## ACORN ARCHIVES



8-BIT MICROS, RISC MACHINES & REPTON

## RETRO REVIVAL




CLASSIC GAMES UPDATED FOR 2004

## ARCADE AT HOME




COLLECT AND RESTORE COIN-OPS

003

eMag

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Welcome to Retro Gamer issue 3. I'd be temped to say Retro Gamer mark III, because we've once again made changes to the magazine based on your feedback. You asked for more interviews, more in-depth hardware articles and more 'making of' features. This issue contains all of these and more. Many readers have asked for original retro games on the coverdisc, and that's exactly what we've done with our Gremlin's Greatest Hits collection. We're dedicated to making Retro Gamer bigger and better, so please keep sending in your feedback. For reasons beyond our control, the reader survey failed to appear in issue 2, but we're *promised* it will be inside this magazine. Please take a few minutes to fill it out. Alternatively, you can complete the survey online at **www.retrogamer.net**. And why not contribute to the ever-popular retro gaming message board while you're there?

Before I stop banging on, I'd like to let you know that Retro Gamer will now be published on a six-weekly schedule. This means there will be eight issues a year, with issue 4 arriving on May 27th. I'm sure you'll agree that this is a good thing. Until next time, enjoy the magazine.

**MARTYN CARROLL**
**EDITOR**

# >insides 03





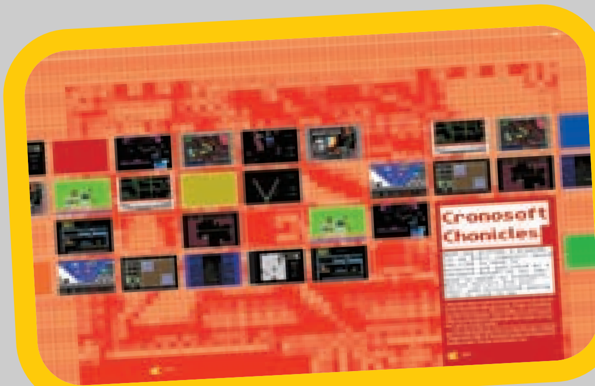
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John Southern takes a closer look at the classic range of Acorn microcomputers




**Repton Retrospect** p22
Richard Hallas looks at the history of the diamond-eating reptilian



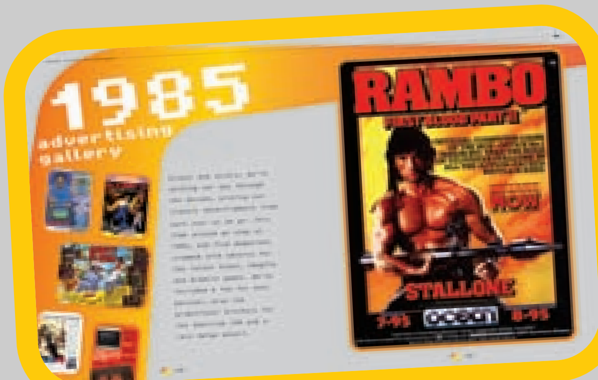

**Hero Worship** p56
Dan Whitehead casts a crticial eye over the games based on our favourite superheroes




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Get the magazine delivered to your door

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Roll-up, roll-up, bargains galore

**Endgame** p114
Signing off with a classic end scene

# RETRO NEWS

The latest developments in the fascinating world of retro



## Retro on the Road

### Don't miss this summer's retro events

There's nothing like a bit of self publicity, so we're more than happy to announce that Retro Gamer magazine is sponsoring this year's CGE UK (Classic Gaming Expo). The event will take place on 24/25th of July 2004 at the Fairfield Entertainment Centre, Croydon. CGE UK is the brainchild of Chris Millard, retro gamer and hardcore hoarder of classic gaming collectables. Chris explained: "I originally wanted to put on a personal show simply to exhibit my own collection of hardware and software, but with the current growth and popularity of retro gaming, it soon spiralled into something much bigger."

Already, CGE UK has secured a number of exhibitors including the US toy giant JAKKS Pacific, the company behind the hugely popular Namco 5in1 Arcade Classics Console. Other attractions already in place include a personal appearance by the Oliver twins (developers of the classic Dizzy games) and an interactive workshop entitled 'Learn how to build your own arcade cabinet'. Hopefully we'll see you there. For the latest information in the run up to the show, please visit **www.cgexpo-uk.com**.

This summer is once again shaping up to be a busy time for retro gamers. Two other key events include JagFest UK 2004 on the 12/13th June (**www.uk.jagfest.org.uk**) and RetroVision 2004 a week later on the 19/20th June (**www.retrovision.org.uk**). Some dates for your diary then.



Fairfield is the venue for CGE UK

## Recurring Dream

### Sega's doomed console alive and well?

With a thriving fan base that seems only destined to grow, and sales of King of Fighters 2002 outstripping most Xbox titles in the Far East, Sega's Dreamcast console appears to be gaining all the momentum of a speed train bound for re-launch city. Although long doomed in the West, the delicate little machine stirs in its slumber and may well see a comeback, which would be incredible news for the multitude of gamers who delighted in the machine in its heyday.

On a recent visit to Sega H.Q. in London, it was suggested that the failed console was little more than a bad memory for the publishing giant, a purge of all related marketing tat and themed memorabilia discarded or distributed amongst nostalgic staff members. However, Sega's operations outside of the Western world suggest an altogether different approach to the machine, with the recent release of a new Puyo Pop game on the Dreamcast. If Sega themselves release any further titles on the machine, it could prompt third party developers to return to the machine, and with enough support, we could all be stepping once more into the Dream Arena.



Are you dreaming? We think not!

# Bundle Blues

## US gets a surprise hit



Capcom US has announced an exclusive bundle package for the Hyper Street Fighter II title due in May. Marking the anniversary of the legendary fighting series, the compilation includes five classic versions of what many see as the beat-em-up that defined the genre as we know it, and when released in the UK, will be packaged with the complete animated film, Street Fighter II: The Animated Movie. Until recently, American gamers were uncertain of a release, but will in fact be getting the Hyper collection together with a new PS2 version of Street Fighter III: Third Strike instead of the animated film. Jealous? We certainly are.

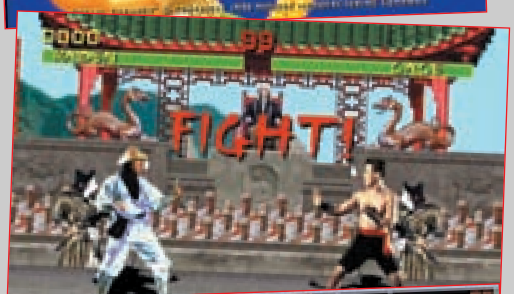





# Midway Dig Deep

## More arcade treasures revealed







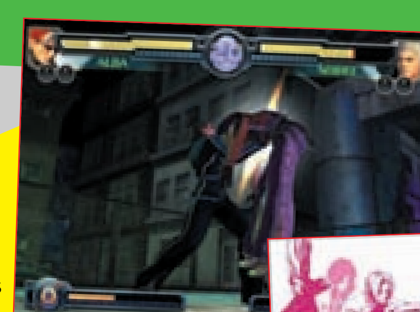
Whilst there's a lot to be said for the curious appeal of bargain hunting, and the personal thrill of uncovering some long lost gaming classic stashed behind a Cliff Richard album at the local car boot sale, classic collections from the big publishers should always be welcome by any retro fan. Midway is well aware of this, and has consistently surprised and delighted us over the years by slapping together the best of its old school releases on several 'greatest hits' style collections. Okay, so they're bundled together on a single repackaged DVD, and they might have been tweaked slightly to account for the current generation console's architecture, and no, they won't retail at less than a quid. But they're all there for your retro pleasures, and they're guaranteed to work if nothing else. Of our many favourites, Midway's Arcade Treasures collection is pretty high on the list, the most recent featuring some truly classic games like Gauntlet, Smash TV, Paperboy and over 20 more.

Now the news that started as little more than a wishful rumour has all but been confirmed, as the company announces the imminent release of Arcade Treasures 2. Although full listing details are sketchy at present, we do know that drug bustin' splatter-fest NARC and the awesome Total Carnage are to be included. But the biggest and best news of all is that Mortal Kombat I and II are definitely part of the package. We've heard whisper of MK III also being thrown into the fray, but you'll have to wait a little longer for further confirmation, which we'll bring you as soon as we have it.

While on the subject of Midway, it's also been confirmed that a new Gauntlet game is in the works, with former id level designer Jon Romero involved. Hopefully it will be better that Dark Legacy.

# A New Dimension

## SNK's flagship series finally evolves






Arcade veterans and arguably the most prolific beat-em-up publisher in existence, SNK is currently working on a new King of Fighters game that will break several traditions in one foul roundhouse kick to the head. Renowned for its steadfast refusal to wander outside the confines of the 2D fighting realm, and determined only to release endless re-workings of its arcade games in some kind of self-devised exclusivity clause, the company is now turning its back on both those ideals with King of Fighters: Maximum Impact, designed in 3D and exclusively for the PS2. Whilst some fans may see this as some sort of betrayal, others will no doubt welcome the addition of new fighters, new moves and a whole new way of playing the classic KOF game.

Side-stepping and new jumps will be included, never before seen fighters merge with old favourites, and redesigned as well as completely new environments will all feature when the game gets a release at the end of this year. The end of an era certainly, but hopefully a great start to an entirely new one for the famed series.

# The RETRO FORUM

your letters make us warm...>



## Pocket pleasure



Hi there. I've just seen Retro Gamer magazine and have instantly bought a copy over the Web. I hope to subscribe to it soon. Being a child brought up during the 80s, I'm a huge fan of old computers and consoles, and thanks to emulators I now play tons of classic games on my Pocket PC. There are lots of emulators available for the Pocket PC, and I think people just don't realise how great Pocket PCs can be for retro gaming. It's like having 12 consoles in one! For around £260 you can instantly have the best portable gaming machine around. Please look at doing an article on the Pocket PC!
P. Johns, via email

MC: Emulation is a huge topic area and we're chipping away at it, issue by issue. Look out for articles on emulators for the Mac and yes, Pocket PCs, in upcoming issues.

## Feature ideas

Lovely mag. Thoroughly enjoyed it – it's not often I'll read a computing magazine all the way through, and I certainly hadn't done that since the old days. Loved the article on the Speccy, by the way. Are there any more like that planned, such as the C64? How about some interviews with the old stalwarts of the gaming world? I see Jeff Minter's recounting Llamasoft's history now. What about an interview with Rob Hubbard or some other luminary?



How about an article each issue focusing on one game, complete with hints on gameplay? There are so many games out there that I never finished first time around. After 20 years, I need closure!

Keep up the good work.
**Phil Smith, via email**

**MC: We'll certainly continue to focus on classic games, but I'm not convinced about including playing tips and tricks. We'll have to wait and see. Interviews with programmers from the past, along with gaming personalities, will appear in every issue of Retro Gamer.**

## Tightrope walking

Greetings. First off, congrats on the mag and on its popular reception. It's about time is all I can say. Having enjoyed your

first two issues, I do have one word of warning though. There seems to be a bias so far towards the 8-bit home computers we enjoyed here in the UK in the 80s. Fine and good, but there are too many retro gamers playing on other formats to neglect them. You've a tightrope to walk, that's for sure. As for your comments that the NES didn't do too well in the UK, well, that's true, but please remember that by our nature, retro gamers are acquisitive and discerning. A lot of us are collectors and as such take a hearty interest in machines that Joe Public may have ignored.

Secondly, the question of how we define 'retro'. I'd tend to agree with you, Martyn, that any machine not in production could be considered retro. But, as you pointed out with perhaps the two most glaring examples – the PlayStation and the Dreamcast – there are definitely grey areas. With the Dreamcast boasting games that can still compete with the current consoles, it seems unfair to consider it retro. Its end was definitely premature, whereas the Playstation should have been put to bed years ago to rest alongside its murder victim, the Saturn.

I think retro gaming is what we want it to be. I personally would be happy to see reviews of current games that sport 'retro' gameplay, the most obvious example being the superlative Ikaruga. I like retro gaming partly for the nostalgia, but far more for those types of games that are rare to non-existent now. Technological snobbery has left us with no choice but to look back in time if we want gameplay as pure and sublime as the likes of Super Mario World. This is a




shame, but for me it's all the more reason to champion those games on current formats that are retro in their gameplay. I mean, honestly, is anyone upset that Panzer Dragoon Orta is a pretty version of Afterburner? No, me neither. Retro's what we make it. Anyway, keep up the good work and good luck.
**Chris Dempsey, via email**

**MC: Some very interesting points there Chris. Consoles will be covered in due course, starting with the Nintendo machines in issue 4. And not forgetting the handheld feature in this issue. I'm sure that any bias will be smoothed out over the course of the year. In addition, I'm always keen to mention new games with classic gameplay traits. It's just that, remakes aside, they're few and far between.**

## Good stuff

Hi. I've just bought issue 2 of Retro Gamer, having also bought the first issue. I'm really enjoying it and will almost certainly take up the subscription offer. I thought I'd email you and let you know the kind of stuff that I'd like to see in the magazine.

I'm 28 and so most nostalgically remember the home computing scene of the 80s. I was a big fan of Acorn machines, particularly the Electron and BBC, so I'd love to see coverage of these.

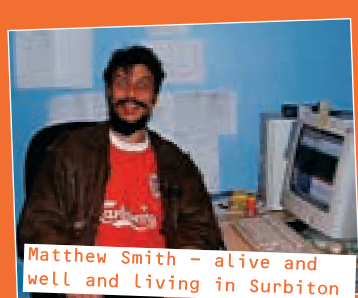
## Excellent!

What an excellent magazine. I, along with many others I suspect, have waited for what seems like an eternity for a magazine dedicated solely to retro gaming. Many more mainstream publications have started to recognise the growing interest in retro, but their contributions are – by necessity I feel and not through lack of interest – rather short, and tend to be console/obscure system related.

Whilst this is by no means a bad thing, it is not really what interests me. I am from the 8-bit Spectrum/Commodore era and my (fairly) recent rediscovery of the classic tape-based games I spent hours playing as a youth, has rekindled my interest in the 8-bit formats. Through the amazing World of Spectrum website, I am that youth again – much to the annoyance of my wife, and a 10 year-old PlayStation 2 owning son who cannot see what all the fuss is about!

There is a wealth – an absolute wealth – of material on this subject matter that I'm sure you'll never be short of something to print. Please allow me to suggest one or two options that I personally, and hopefully others too, would like to see in future issues.

How about the opportunity for readers to submit reviews of their favourite games from yesteryear?


Matthew Smith – alive and well and living in Surbiton

Continued reminiscences from magazine journalists of the time. The Crash article was brilliant. I would love to see as a follow-up, with something similar concerning Your Spectrum magazine, as this was the only mag that could rival Crash.

Let's see more developer histories. These make excellent reading. How about featuring some of the lesser known, but equally influential companies, such as Gargoyle Games, Bug Byte, Software Projects, Quicksilva, Palace Software, Hewson Consultants, Rainbird and Firebird. You get the meaning!

It would be great to get more interviews from some of the people responsible for creating some of the most engrossing games of the time. The guy who wrote 3D Deathchase, the team responsible for Way of The Exploding Fist, Ritman and Drummond et al…

These are only suggestions, but now I issue you a challenge. If you can obtain and publish an interview (a new one) with the legendary Matthew Smith by issue number 8, I'll donate £50 to the charity of your choice!

Keep up the absolutely first-class work.
**Barry Harding, via email**

**MC: Well we like a challenge! I've been angling for a Matthew Smith interview since issue 1, so fingers crossed it will come about before issue 8!**

**Taking your suggestions in order. I'd be more than happy to receive reader reviews. We're planning a readers' favourite games feature later in the year, and information on how you can contribute will appear shortly. Magazine histories make interesting reading, although personally I'm not sure Your Spectrum would warrant a feature. Big K and Zero maybe, and certainly Computer and Video Games. Developer histories and interviews will feature in every issue. Interestingly, I've recently been talking to a couple of people about possible Gargoyle Games and Telecomsoft retrospects. Time will tell.**

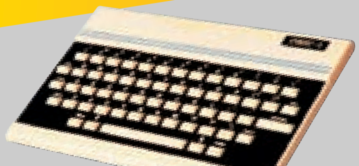


I also have fond memories of the Spectrum and later on, the Amiga and ST. I'm also interested in the background behind some of the classic games – how they were created, who the authors were etc. I'm interested in the emulation scene and I'd especially love to hear about anyone who's produced emulators for handhelds like the Palm. I'm pretty technical (I work as a software engineer), so I'd be interested in more technical articles too.
**Richard Leggett, via email**

**MC: Hi Richard. I trust the Acorn article and Repton feature in this issue will be to your liking!**

## Sacrilege!

Hi Martyn. First, thank you for bringing out a first-class retro magazine, It's just what a middle-aged retro junkie like me needs. Now onto my only gripe! I was happily flipping through the pages and eager to subscribe, when I see the great unsung hero of the retro scene, the Oric-1, ridiculed in print! Now surely someone who is clever enough to bring out a classic magazine such as Retro



The humble Oric-1. In no way whatsoever a poor substitute for the Spectrum

Gamer, should be aware of the sheer brilliance of the Oric line of computers. I for one would welcome you to break into my house and leave a nice Oric-1 16K in my spare bedroom!

The Oric scene is still very much alive and it won some very good 8-bit demo shows in the last few years. I would love to see a story about the Oric-1, Oric Atmos and the legendary Telestrat. Finally, I would like to suggest a regular feature on people's collections. I know that there are a lot of avid collectors of old retro stuff out there. It would be nice to see what other people have. I believe that Retro Gamer has a unique opportunity to become the voice of retro and the community in the coming months and years.

Keep up the good work.
**Bob Bazley, via email**

PS. Even though you put down the Oric, I'll still be subscribing!

**MC: Fear not Bob. Our hardware expert John Southern is a big Oric fan, and he's already asked about contributing an Oric history. I've just got to cover consoles and 16-bit computers first! In the meantime, I'm sure you'll find plenty of interesting stuff in the magazine.**

## Better back then

Dear Martyn. First off, I am really glad to see a retro game magazine on the shelves. Long may you reign! I have never written to a magazine before, but I feel that because retro games are so close to my heart, I would like to share some thoughts about modern games with you.

At the risk of sounding like an old fart (I am only 33), modern games are just not exciting any more. They seem to have a horrible 'corporate shine' to them that takes something away from soul of the gaming experience. Retro games seem to have the drive, enthusiasm and love that is sadly lacking from some of today's titles.

For a while now I thought it was just me, until I observed my friend's six-year-old son playing Sonic 1 on Gens (a Megadrive emulator for the PC). He absolutely loves this game, far more that any of the newer games he has played. Don't get me wrong – some newer games are worth playing, just not enough. Gregory Horror Show on the PlayStation 2 for example is superb, but it's just one such title.

One of my all-time favourite games is Lemmings (and its various sequels). Can you imagine a game such as this getting published today? I bet it would be laughed out of the publisher's office! Take a good long look at the titles on offer in any game store and what do you see? Row upon row of first-person shooters, third-person shooters, RPGs. Where has the imagination and originality gone? It's no wonder that the retro scene is so big at the moment. Long may it last I say.

By the way, just for the record, I think the old tatty style front cover design should stay.
**Mike Winn, via email**

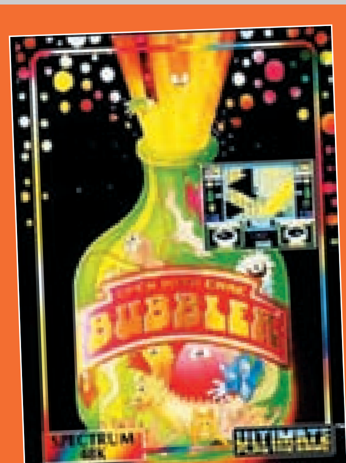
**MC: The software industry is currently dominated by EA, Microsoft and the other heavyweight publishers. But back in the 80s we had companies like Ocean and Domark, with their equally soulless licensed games. The desire to play it safe by falling back on generic game styles and big brand names was as much a problem then as it is now. It's true though that graphics are seen to be more important than gameplay these days. You mention Sonic, and I feel few readers would choose the latest 3D Sonic games over the 2D originals.**



## Bubbling under

Hi Martyn. I just wanted to say thanks for a brilliant second issue of Retro Gamer. The changes have made a massive difference, and you certainly have got a winner here with the first dedicated Retro magazine. As part of the C64 community (and retro in general), I've been personally waiting for five years for a magazine like this, so thank you very much.

In the Pieces of 8-bit article in issue 2, you mentioned Solar




Jetman and its recent C64 finding. As well as that game, you may be surprised to learn that Ultimate had another title in production which was also scrapped – a C64 conversion of Bubbler, in production by a coding group called Lynsoft. The story goes that Ultimate insisted that Lynsoft replicated the exact graphic shifting method of the Spectrum version. However, due to clock speed differences between the Spectrum and C64, the C64 version was approximately 50% slower and Ultimate didn't like what it saw speed-wise (even though the game was pretty accurate). So at 70% completion stage the game was axed. The full story is documented over at my Games That Weren't website: http://homepage.ntlworld.com/frank.gasking.

Keep up all the good work, and I'll look forward to issue 3. A feature on C64 music would be fantastic, maybe even a bit on the recent BIT Brighton event last September, where Rob Hubbard and Ben Dalglish played live in a one-off concert.

Thanks and regards.
**Frank Gasking, via email**

**Good to hear from you Frank. Your website is simply fantastic, and I urge all readers to take a look. Be careful though, as it can easily consume a whole afternoon! Good luck in tracking down those unreleased games.**

## You said it!

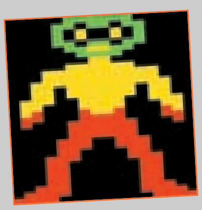
It's so refreshing to see a magazine dedicated to the retro scene. I missed issue 1 like a total twat, but bought issue 2. I have had it three days now and am unable to put it down. The memories just keep on coming back.

I feel the software industry is far too commercial now, although the level of detail in the latest games is excellent. I recently watched a programme featuring Jeff Minter, who is currently working on a project for a big name company, and he commented about how it takes so many people to pull off the job now. I wish the old days would come back, when people did it for love, and not just the money…

Wishing you and your team every success in the future.

**Dale Mac, via email**

## Amazing!



Hi. Firstly may I say what an excellent publication you have here. Both issues so far have been amazing. The Commodore feature was excellent and I look forward to a similar article on Acorn. I still have my old Electron, but I tend to use the emulation side more these days. www.stairwaytohell. com is an excellent resource.

May I make a couple of suggestions for future issues? A feature on the Repton series of games, both BBC/Electron and PC versions. As you mentioned in issue 1, Superior has ported this to the PC now, but there are many other remakes available on the Net. Second suggestion is a games list by platform of all UK commercial releases. Possibly as a database on the coverdisc. Fields could include game name, publisher, year first released, genre and format (disk/tape/ cartridge etc). I would suspect that initially this would be fairly incomplete, but I am sure many readers would contribute entries to create a fairly comprehensive database. I think many collectors of originals and emulation fans would find such lists very useful.

Hope these suggestions are of some use, and thanks for a great magazine.

**Phil Cole, via email**

**MC: The database is a very nice idea Phil, but getting it up and running would be a mammoth task. But if there's enough interest…**

## Razzle dazzle

Hi Martyn. I spotted your mag in the newsagents the other week and grabbed a copy with a certain excitement only matched by those generally found on the top shelf. After swapping several copies trying to find an unmarked one, I decided to pay for it and not mention the condition to the friendly shopkeeper. That was a smart move after realising the worn effect was an optical illusion and my poor eyesight was showing its age.

Just read Issue 2 and thought it was time to check in with some input, hopefully the first of many comments and contributions. So far so good – I like the content which co-insides nicely with my recent discovery (and obsession) with MAME and all things emulated. My era was early 80s consoles, of which I had all at some point, and regularly made that famous pilgrimage on a Saturday to Silica Shop in Sidcup to get the latest release with my hard-earned pocket money.

Here's what I'd like to see coming in your mag: more on emulation and building cabs; more on the old consoles and collecting them; a little less on old home computers maybe. I'd also like to see some articles on the early PC games scene – where was Larry in your working class heroes Top 10? I like the ads pages, especially the ones showing the cool hairdos I used to have as a kid.

Keep up the good work!

**Chris Hampson, via email**

## Get the rock outta here

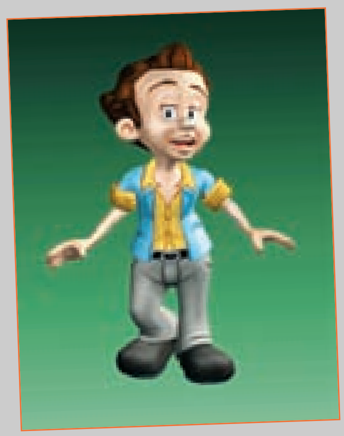
Hi Martyn. Firstly, top mag. It's about time we had a decent retro mag. Anyway, this isn't a sucking up letter so I'll get to the point. After reading your article on the Commodore 64, I remembered something you and the rest of the retro world may find of interest, particularly as I don't recall much press about them fullstop. I am talking about the Swedish rock band Machinae Supremacy (www.machinae supremacy.com). What makes them interesting is that they use the SID chip to generate lots of samples that are heard in their music. The band seem to be big retro fans themselves and in fact the forum on their website has a dedicated gaming section. So even if the music isn't to your tastes, the fact that they are keeping a piece of computing history alive is reason enough to love them!

**Ferret, via email**

**MC: That certainly sounds intriguing. Perhaps they'll get more of a mention in the C64 audio article due to appear in issue 4.**



Machinae Supremacy playing at Back in Time Live 2002



**MC: Top-shelf magazines Chris? I'm not surprised your eyesight's poor. As for Leisure Suit Larry, you'll find him appropriately placed in the thrill-seekers section.**

## Text appeal

Hi there i just bought the mag vol.2 im glad sum1 is bringing back the old games cud u tell me where i cud get hold of vol.1 coz i wud love 2 collect them all ok plz get bk 2 me on this matter thanx

**DRAGONMASTER191, via email**

**MC: This is just one of dozens of requests we've received for issue 1, although the others were somewhat more legible. We're afraid that issue 1 has completely sold out, and there are no plans to print more copies. Sorry!**

## Coming right up

Dear Martyn. I have bought both issues of RG and have been really impressed with its content. I really loved the old adverts section – it certainly brings back some memories!



The first computer I had when I was about eight was the Texas Instruments TI99 4-A, a great little machine for its time, and it had possibly the best Space Invaders clone ever – TI Invaders! I was wondering if you could feature

this machine in future issues. I know it wasn't very popular, indeed I can remember searching the high street for hours just trying to find software for it. That was all part of the fun and the feeling you got when you found some games was amazing.

Would it also be possible to include some ROM images to enable us to actually play some of the games on the emulators on the cover disc? I know there's legal issues with this, but there are some that have been made freely available. I would even be prepared to pay a little extra for the privilege.

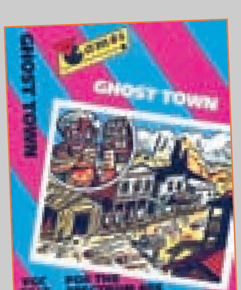
Speaking of emulators, some of the ones I tried from the issue 1 coverdisc are extremely fiddly to get going. Perhaps you could include a regular feature in your magazine covering emulation, with tutorials on how to set them up. I've tried numerous emulators on various platforms – some of them great, some of them pretty awful.

Anyway that's my twopenneth. Congratulations on an excellent start. Please keep it up!

**Kathryn Colling, via email**

**MC: Thank you for your comments Kathryn. Hopefully you'll be pleased with this issue's coverdisc, and there's detailed information on how to set up the emulators at the back of the magazine. I'm sure Shaun Bebbington, who wrote the Commodore feature in issue 2, has a TI99 collection. I'll see if he's interested in writing a feature in a future issue.**

## Help!



Andy's been stuck in the same damn town for 20 years! Can you help him?

Hi Martyn. Just a quick email to say well done on a fantastic magazine – just what I need to cheer me up. Anyway, there was an old Virgin text adventure game called Ghost Town, and 20 years on I still cannot get past the point where you have to fill up your flask at the pump before you venture into the desert. I still need help with this. Perhaps you could put it out to your readers.

**Andy Bowden, via email**

**MC: I'm not familiar with the game myself Andy, but I'm sure one of our readers can put you out of your misery. Over to you…**

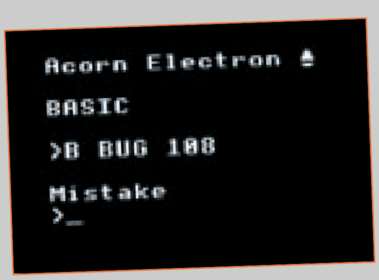
## Fact or fiction?

Hi. I just wanted to thank you for making the best computer magazine I've read in ages! After reading issue one, I was well and truly hooked. Issue 2 is even better with many interesting articles. I was captivated by the retro game creator section and look forward to spending many days ahead making my own simple games.

Looking over the magazines, a flood of gaming memories have come back to me. I too was taken in by the secret room myths in Jet Set Willy, but there were a lot of myths afloat back then. I remember being told that if I typed 'B BUG 108' into my Acorn Electron, it would allow me to play games designed for different machines! A syntax error, a few unusable games and a hole in my pocket were the result! I would be interested to know if there were any other myths of that kind going around at the time.

Anyway, hope to be reading your magazine for a long time to come. Keep up the good work.

**James Fish, via email**




**MC: Computing myths would make a fantastic feature. I remember being told by a friend that your car in Spy Hunter transformed into a plane when you got to a certain point. Well I played the game for hours, but it just kept looping between the car and the boat. Obviously it was a lie, but I later read that Midway planned to include a flying section, but canned it due to lack of memory, so there was at least a shred of truth to his tale. Perhaps we could take popular computing myths and either prove them or debunk them, much like they do with urban legends on websites like www.snopes.com. Send in any interesting myths and we'll get the ball rolling.**

## No fillers

Hi Martyn. I've not written to a computer magazine since about 1986 but thought I had to congratulate you on a great new magazine. I've bought both issues so far and it's an excellent read – keep it up. I enjoy the adverts from yesteryear and hope there will be more to come. How about adverts featuring Wheelie and Back to Skool? I don't think it's just filler, as it brings back memories of all the old games and machines from the past. I also really enjoy the histories of different computers, as well as the features looking at a single software publisher from back in the day.

In future issues I'd like to see interviews with some of the old software houses, asking for their thoughts on emulation. I'm interested in why some allow their games to be shared quite freely, while others like Codemasters and Ultimate have denied their games from being distributed. I'd love to read the actual reasons why they won't allow their games to be distributed.



Retro Gamer 1 available on eBay – for a small fortune

All in all a very good read and I can't wait for issue 3. Bring it on!

**Sean Mellor, via email**

PS. Your magazine price guide in issue 2 missed out one magazine – Retro Gamer. Did you know both issues are already selling for over £20 each on eBay?

**MC: We've been monitoring eBay with interest. Issue 1 is fetching crazy prizes, but this really is the only way you can now get hold of a copy. Regarding your other point, I think the reason why publishers like Codemasters and Ultimate/Rare guard their back catalogues is because there's always the possibility of updating an old title. Indeed, Rare has just released Sabre Wulf on the GameBoy Advance.**

## Dragon tales

Hey, just bought your second issue, missed the first, which was a shame as I love your mag! I

## Art and design

Hello! I have now received Retro Gamer issue 2 and it just keeps getting better and better. The way you are writing reminds me of the glory days, with Crash and Your Sinclair and the rest of the wonderful magazines. I already knew about lots of things before I read RG but it doesnít matter at all, as I prefer having a proper magazine in my hands instead of sitting for hours in front of a computer! Oh, I almost forget. I have a question for you. Will you interview some of the artists behind the wonderful inlay designs, in particular those who created the covers for Bug Byte, Software Projects and Ultimate games?

Cheers from Sweden!

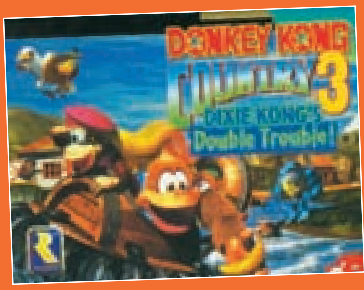
**Olle Karlsson, via email**

**MC: Hi Olle. Glad you like the magazine. Tracking down artists can be difficult, but I'll certainly look into it.**

## Start them young

Dear Retro Gamer. I would firstly like to congratulate you on your magazine, which looks to be a total success, and secondly, thank you for inspiring me to look more deeply into the subject of retro gaming.

I'm only in my teens so I don't have a great knowledge of systems such as the Commodore or Atari. But I do have distant memories of the famous Sega chant after inserting a cartridge into the Megadrive or Master System. Anyway, thanks to your magazine I have taken up a new hobby – collecting retro gaming systems. Mind you, I haven't started yet! I'm afraid to say my current collection is rather poor, consisting of just an old Super Nintendo and an original black and white Gameboy.




Looking back, the Super Nintendo had some quality games – the Donkey Kong series for example. The soundtracks to these games were superb, and the levels themselves varied so much that you could never possibly become bored. Currently I own a PlayStation 2 and I can think of very few games that come close to this standard. Maybe in 15 years time, when I have a PlayStation 6, I'll think the same thing of the PS2 as I do the Super Nintendo. I'm not sure.

This is the first letter/email that I have ever sent to a magazine. I have never before been so inspired to write. The letters section in issue 2 allowed people to express their opinions freely. This is a big advantage for a magazine of your type. Many mags only print the positive feedback but you included the negative views as well. In some magazines I've seen the writers of letters humiliated just because they have different views to the editorial team. So well done. Talking of the retro forum, until I had read some of the letters, I didn't even realise that the 'old look' was a 'look'. I thought you just had really bad shipping and the magazines were very badly handled! Sorry, but I think this devalues the whole magazine.

You asked for ideas, so here's one: how about giving out a prize for the best letter each issue? Possibly a year's subscription, if they don't already have one! Anyway, thanks for a great magazine.

**Scott Lawrence, via email**

**MC: I'm glad we've inspired you to take up retro collecting. I'm sure you'll find it a rewarding hobby. Thanks for your comments too – it's always good to hear that we're doing something right. A star letter is a good idea, providing we can source some appropriate prizes. As for the tatty cover, I'm afraid other readers also found it too convincing so we've dropped it for now.**

used to spend many a week typing in program listings on my Dragon 32! Speaking of which, can we have a Dragon feature? Anyhow, great job, loved it...

**Scott Anderson, via email**

**MC: I've already been offered a feature on the Dragon, but I'm not planning to use it just yet. Bear with me.**

## Dizzy dilemma

Hi Martyn. I have just finished reading the excellent Retro Gamer magazine, and must congratulate you on such a well written, informative magazine. Like so many other people, I have waited a long time for a regular retro magazine.

I like the 'old style' look – the fake creases and marks make it look very authentic. The font used for the headings is just right. It brings back a lot of memories. Your Top 10 lists are a good idea, and the article about Crash magazine was very informative. Your article on Dizzy was also of special interest.

May I make a suggestion for your coverdisc? Why not put every Dizzy game ever made on there. I remember (with great affection) playing Dizzy on the Spectrum many years ago. Keep up the good work and may it last for years to come. Can't wait for the next issue.

**Janis Pennycook, via email**

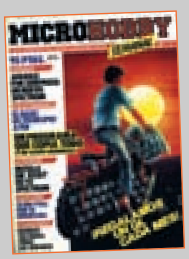
**MC: With Dizzy, it's a case of we would if we could but we can't. Codemasters forbids its back catalogue to be distributed, and we were told very recently that this is still the case. I guess you'll just have to dig your old Dizzy tapes and play them in a real Spectrum.**

## Great days

Hi Martyn. I was pleased to find your wonderful magazine in my newsagent the other day. It's about time that retro gaming had more of a say in the gaming world of today. I come from the days of the playing on my faithful Spectrum 48K, and they were great days indeed. A magazine like yours can now make a younger generation appreciate how games have influenced modern titles. Games like Turbo Esprit must have been an influence on the GTA games. And what about Rebel Star Raiders and Laser Squad – definite influences on today's strategy games. Yes, I'm proud to have lived the Speccy life in the 1980s. Keep up the great work.

**Lee Friend, via email**

## More friends abroad




Hi there Martyn. My name is Paulo Teixeira. I live in Portugal and I would like to share some of my opinions on Retro Gamer. Firstly, I would like to congratulate you all there for your excellent job, which requires lots of time and dedication. Excellent work! Keep the wave!

Now, can I offer some suggestions, if I am allowed to. In the retro forum section I think it would be useful to print the email addresses of the participants, so readers may change their opinions with each other if they want to. I speak for myself, as there were a few guys I would like to write to but, since there were no email addresses posted, I couldn't.

Retro Gamer could also talk about other Retro Magazines, such as the most important Spanish ones – Microhobby and Micromania, from Hobby Press. I especially liked the interview with the Oliver twins and I would like to see more and more interviews in the future. It's a great idea! I would also like to see more reports about companies, such as Gremlin Graphics, Elite Systems, Firebird, Ultimate Play the Game, A 'n' F, Durell Software, and many many more!

Lastly, I would like to give my own definition of a retro machine, in answer to a reader who asked for a definition. For me, a retro machine is not only a machine which is no longer produced. It's more than that. In my own vision, a retro machine must have ceased production for at least five or ten years. I think that the N64, PS1 and Dreamcast are not yet retro machines.

That's all folks! Best luck for you at the magazine and a BIG HUG to all readers!

**Paulo Teixeira, via email**

**MC: Some good points there Paulo. I will print email addresses in the magazine, but only if the sender asks me to. Expect many more interviews and software house histories in upcoming issues.**

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THE MASTER Compact
COMPACT
acorn electron




# >Acorn Archives

Alright, settle down class. Today's history lesson is all about the Acorn range of microcomputers. I've invited John Southern to tell you all about them. Pay attention at the back – there'll be a test in the summer!

In December 1978, Chris Curry and Herman Hauser formed Cambridge Processor Unit to make fruit machines for Ace Coin Equipment. Curry came straight from Sinclair, while Hauser was studying for a PhD in Physics at Cambridge University. Cambridge Processor Unit became Acorn Computing after a fortuitous meeting with Roger Wilson. He had developed an 8-bit system using the Mostek 6502 processor. At the time he had no means of producing a chip to contain an operating system. Acorn produced a PROM for the OS, which, legend has it, ran first time.

By March 1979, Acorn was selling the computer under the name of System 1. With 256 bytes of RAM and a 512-byte ROM chip holding the monitor program, the self-assembly hobbyist kit, complete with LED display, keypad and cassette interface, went on the market for just £69. Over the next year, Acorn developed more advanced systems with similar amounts of RAM (incredible at the time) for the home market. The final System 5 version had access to up to 32Kb of RAM and a processor running at a slightly faster clock rate. One notable development of these early machines is that a host of hardware add-ons were created to make the machines do something practical – and generate a cash income for Acorn. These included a VDU interface and an analogue adapter for measurement purposes.

## From small acorns

By now the small company had big ambitions and decided to target a wider audience with a ready-assembled computer. Running at 1MHz with 2Kb of RAM, the Acorn Atom was launched in March 1980 for £170. To keep previous customers happy, it was also sold in a self-assembly kit form for £120.

Advertised widely in the UK's computer press, the machines sensibly included several expansion ports. The 6502A processor was connected to an ever-expanding ROM chip, which by now contained 8Kb of an integer-only BASIC. Expansion was seen as the key to the market. Acorn knew that once a customer had bought the machine, they would sooner or later start to buy additional hardware.

To beat the rival systems on sale, Acorn quickly incorporated a colour graphics mode. With four colours it had a maximum resolution of 256x192 pixels, allowing users to produce simple graphs and images. Unfortunately not all television sets could cope with the somewhat variable signal rate produced by the machine and many were returned.

Over the next few years, peripherals continued to be designed that could expand the small, simple computer into something that could handle just about any job you chose. Floppy disk drives were seen as the professional way to add storage capabilities, rather than half-hearted attempts to improve the standard cassette tapes that were tried and quite rightly ridiculed by other computer manufacturers. Acorn had seen the future and knew that chip prices would fall, so they designed the RAM to be expand to up to a mighty 12Kb. Varying prices at the start of manufacture meant that they could only afford to include 2Kb, although this was more than all the rival machines, without a large price increase. Expandable RAM was designed to keep them ahead of machines from rival manufacturers that would benefit from the dropping RAM prices.

One of System 1's hardware additions had been a sound interface to make single-channel noises. The Atom had a multiple-channel sound system from the start, making it one of the first multimedia computers on the UK market. Benefiting from close ties with Cambridge University, Acorn later added network capabilities to the machine. How other manufacturers such as Apple, could years later fail to see the advantages of linking computers is still amazing.

## The true British computer

Later in 1980, a follow-up computer code-named Proton was already in the design stages. The BBC, noting that computers were becoming more and more popular, decided to start a national computer literacy campaign (the public service broadcaster was obliged to educate after all). For this, they invited UK computer manufacturers to submit designs for a BBC-branded computer. The initial specification was similar to the Proton and so after a hectic week of hardware hacking, Wilson, Curry, Hauser and Steve Furbur managed to make the prototype run, just a couple of hours before the BBC team came to view it. The design was

## Take the Tube

**During the design of the Proton (BBC Microcomputer), Acorn was unsure if the 6502 processor was going to remain the perfect choice for the future. Rather than risk the design only to have it fail on CPU grounds, they decided to add additional circuitry to allow a second processor to be connected. This was considered the prudent option as the extra cost of circuitry design was weighed against the potential redesign of the whole computer. This circuitry was to become the 'Tube'.**

**The Tube was a hardware interface that allowed the computer to interface with a second processor. The alternate processor acted as a separate computer system in its own right, but used the host for all the input/output operations. The first such processor produced was the 6502 with 64Kb of RAM. Programs that cheated and read directly from memory locations failed to run as memory shifted in the map with a second processor. Because of this, you sometimes find software in various Tube 'flavours', where for speed purposes the designers wrote directly to memory addresses.**

**Another second processor option from Acorn was a Zilog Z80, again with 64Kb of RAM. It allowed you to run CP/M programs while leaving the machine's main processor to handle graphics, printers, the clock, floppy disks etc. Eventually a few third-party manufacturers produced Tube co-processors, but the expense was limiting and in reality they were only ever used by a few teaching centres and cross-platform development houses.**


The Acorn Atom


The BBC Microcomputer


The Acorn Electron

so impressive that the BBC team chose the Proton with an initial order of 12,000 machines. The Proton development machine was renamed the BBC Microcomputer.

Two versions of the BBC machine were produced. Model A was sold for £235 (soon to rise to £299) and had 16Kb of RAM. The 2MHz 6502 CPU was now fitted with 32Kb of ROM holding the Acorn BASIC system, which was rechristened BBC BASIC (even Sir Clive Sinclair eventually admitted BBC BASIC was the best version of the language, when he fitted it to his Cambridge Z88 portable machines). The rest of the hardware was equally impressive. Both a UHF TV socket and an RGB monitor connection were supplied, allowing users to start off with their home TV before moving on to purchase a dedicated monitor. Along with the cassette tape connection, the BBC had industry-standard analog and RS423 serial ports. This gave third-party hardware manufacturers a free rein when it came to creating peripherals. Two unique expansion ports were also incorporated. One was aimed at the future robotics market, while a 1MHz bus connection provided direct systems access.

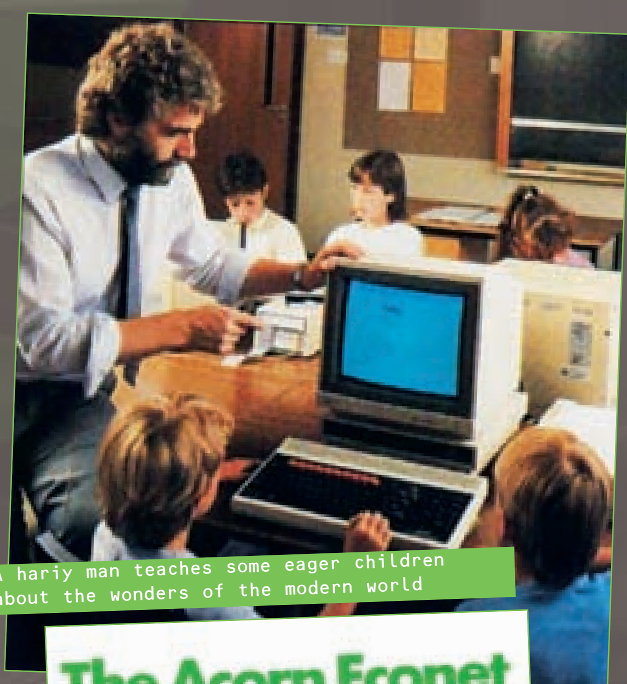
The more expensive Model B at £399 (initial launch price of £335) had 32Kb of RAM and a Centronic interface for attaching printers. To target the more serious user, a disk drive interface was introduced and machines could be networked using the Econet adapter. Later, for the American market, a variant included the Econet and speech synthesiser as standard.

With BBC marketing behind it, the computer was aimed squarely at the educational market. Over 70% of schools choose the machine for growing computer departments and many a systems programmer today can trace their origins back to using a BBC computer in school. Over 1 million BBC computers were sold, making it incredibly important in the history of British computing, regardless of which computer fan club you belong to.

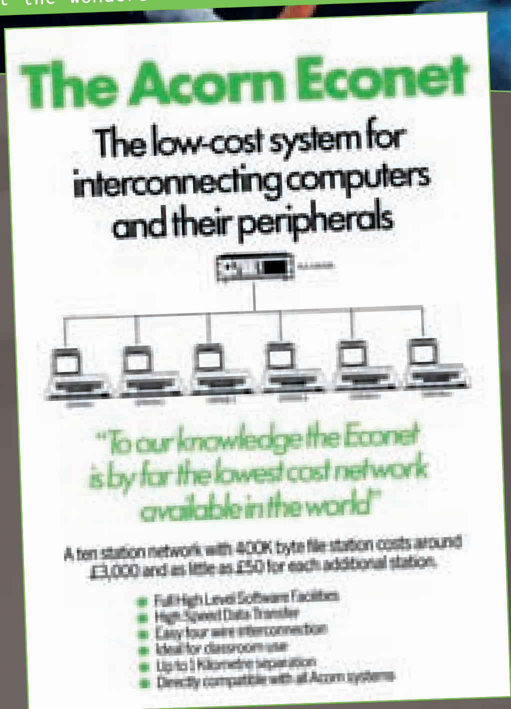
## Cheaper by the dozen

Sinclair's cheaper ZX Spectrum, along with the Commodore and Atari computers, started to impact on sales. In 1983 Acorn decided to produce a cheaper model. As a result, the Acorn Electron project was launched. This was designed to use the BBC Micro's architecture and so instantly provide a back catalogue of software.

Circuitry costs were again simplified down to a single ULA (Uncommitted Logic Array) – the BBC machines had two. The Electron came with the improved BBC BASIC II, but cut out most of the expansion ports used on the BBC. Still with cassette, TV and monitor ports, the Electron had a single expansion adapter for other hardware.



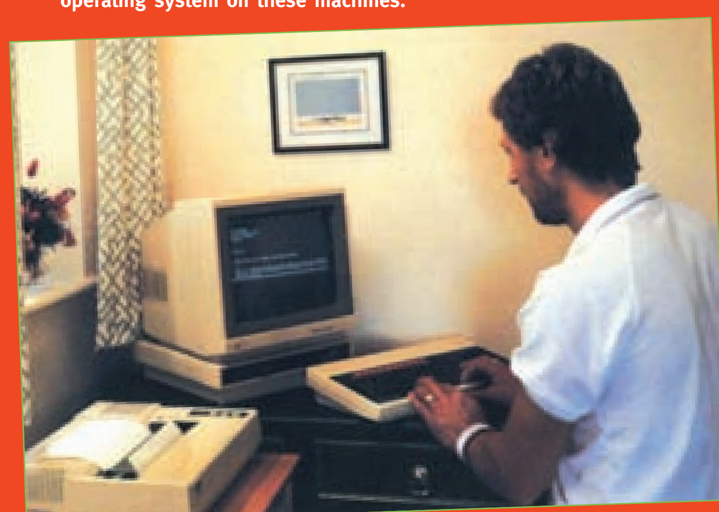
A hariy man teaches some eager children about the wonders of the modern world




# Business model

**Olivetti took a look at Acorn's strategy and saw that the business machine market was not being addressed. As a stopgap, the BBC Microcomputer B+ was sold. This was a simple reworking of the Model B, with an improved ROM and twice the amount of RAM. Sales for this enhanced model reached nearly 30,000.**

**In early 1984, the Acorn Business Computers came about. Based on the B+, with a built-in monitor and separate keyboard, they had between 64Kb and 4Mb of RAM. Many had hard disk drives were included but the killer feature was a second processor. Z80 piggy-backed models could run C/PM, which was seen as the dominant business model. The newer 80286 piggy-backed variants took care of the DOS market. Model 210 had a 32016 processor from National Semiconductors and a PanOS operating system. The chip had a 32-bit core and 16-bit bus (originally called the 16032 CPU). PanOS has virtually been forgotten these days as Xenix soon replaced it as the operating system on these machines.**



For those who wished to add more peripherals, Acorn produced the Plus adapters giving more sockets.

Plus 1, which is still commonly found on eBay, added cartridge slots, joystick ports and the vital Centronic printer interface. Plus 3 was a disk interface for adding faster, more convenient storage. Third-party manufacturers Slogger and PRES designed more expansion ports. The Slogger Rombox Plus was similar to the Plus 1, but included four ROM/RAM expansion sockets. This meant that you could have programs such as word processors fitted into ROM for faster and more convenient loading.



Due to delays in the single ULA design, the Acorn Electron failed to make the most of the Christmas sales rush in 1983. The machine didn't achieve sufficient sales, putting a tremendous financial strain on Acorn, and during 1984, the company had to be rescued by the Italy-based company Olivetti.

## Master and commander

In January 1986, the newly structured Acorn launched the BBC Master 128 computer. Backwardly compatible with the earlier BBC range, the designers had not been idle. The processor had a slight change to the 65C02 version that allowed 128Kb to be accessed. For business use, a numeric keypad had been added along with cartridge slots (similar to the Electron Plus 1 expansion box). The ROM contained not just the BBC BASIC but word processing (View) and spreadsheet (Viewsheet) applications. With ADFS (Advanced Disc Filing System) on board, the Master 128 was designed to make use of the newer 3.5in floppy disks rather than the 5.25in.

By September 1986, the BBC Master Compact was launched for the Christmas market. This featured a built-in 3.5in drive and sported sleek new styling that would later be seen in the RISC-based Archimedes range. Over 60,000 Compacts were reportedly sold, and nearly 200,000 of the 128 model, giving Acorn a much-needed boost.

A brief appearance of the Master ET then followed. Without disk drives but with the Econet interface, it was seen as an attempt to try and capture the workstation terminal market. The more advanced BBC Master Turbo featured an additional 65C02 CPU, but the ultimate model was the BBC Master 512. This was the supercharged system of the BBC computer range. Capable of running DOS, it had 512Kb of RAM and an 80186 co-processor. As a final breath, the BBC commissioned the Doomsday Project. Aimed at mirroring the original Doomsday Book, the Doomsday Project was a huge collection of photos, writings, sounds and videos stored on laserdiscs. These could be viewed in a specially adapted BBC Master complete with Laserdisc player and tracker-ball.




Pages from the BBC Master Compact brochure

## RISC taking

Acorn had always sought to be ahead of the competition by using advanced engineering. When Intel refused to send sample 80286 processors, Acorn simply decided that they could do better and set up a design project to make a superior chip. With just 30,000 transistors, a 32-bit data bus and a 26-bit address bus, the ARM2 chip was finally sold as a second processor for the BBC Master range. At £4,000 it was intended for serious development work only.

By 1987 Acorn had decided that 32-bit RISC processors were the future. With the rest of the world beginning to feel the domination of Intel processors, this was a brave move by the board. The new Acorn Archimedes relied on the ARM2 chip and was available in three flavours – the A305, A310 and A440. The A305 was the cheapest at £800 with 512Kb of RAM, while the A310 had a full 1Mb of RAM. The A410 was basically the A310 with an additional hard disk interface and a four-slot backplane to take either 16- or 32-bit cards called podules. The A410 never made it to market, but the A440 did. This top of the range model featured 4Mb of RAM, a 20Mb hard drive and a colour monitor. At £3,150 it certainly wasn't designed to attract the impulse buyer. All three models came bundled with a music editor, paint package and text editor.

While not 100% compatible with the 8-bit range, the Archimedes did include BBC BASIC. At this stage it was up to version V, which is still considered by many to be the pinnacle of BASIC. The 65Host program was a 6502 emulator allowing BBC Micro programs written in assembler to run. The Archimedes' Arthur operating system was not an initial success, and in less than a year there were three revisions. To avoid confusion, Arthur version 2 was renamed RISC OS 2 because the Dudley Moore movie Arthur 2 had just hit cinema screens! This improved version allowed multitasking, and new applications started to be written by third-party manufacturers. With the new styling of the Archimedes A3000, the range was set to continue for a few more years.

In 1989, Acorn headed off in yet another direction. The Archimedes computers were far too expensive for the home market, but they could still target the booming Unix workstation market used by so many large corporations. With a bigger hard drive, the R140 was an A440 in disguise. Arthur was removed from the ROM. In fact, the whole ROM operating system was removed in favour of a hard disk-based operating system. RISC iX was based on the 4.3BSD system and had many features that users would still find familiar after 15 years. Sun's NFS (Network Filing System) and an X-based GUI meant that the R140 could be used as a serious tool. The fact that it

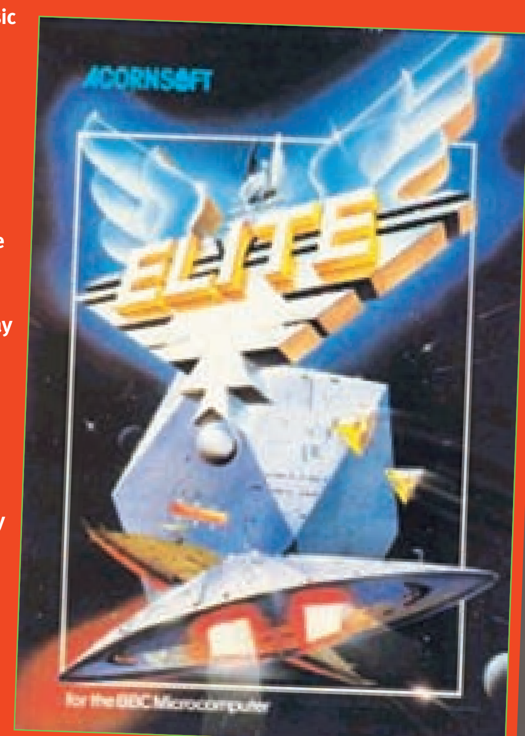

The Acorn Archimedes A3010


The Acorn Achimedes 310


The BBC Master Compact

## Are you Elite?

**A-ha was the classic wire-frame space-trading game in which the ultimate goal was to reach the rank of Elite. Written by Ian Bell and David Braben while at Cambridge University, this classic is still rightly played today and has been ported to many other platforms. Whether anyone still has the forge-proof postcards that were originally used to enter the competition on becoming Elite is anybody's guess, but this was more than just a game right from the word go. The novella and assorted pamphlets in the box indicated that it was a complete media event. Yes, it was a shoot-em-up, but to advance through the game you also needed to trade goods and work your way up the intergalactic ladder. Starting as harmless, it could take weeks of playing just to reach the next level of mostly harmless. Don't forget to save frequently and shoot the Thargoids when thrown into Witchspace!**



could use standard Ethernet cards did not go amiss and many a CAD/CAM project was started on these workhorses.

Over the next six years, the Archimedes machines continued to improve in functionality and performance, eventually selling almost a third of a million. In 1996 the StrongARM processor was launched as a joint venture with Digital. Now owned by Intel, this RISC processor can be found in many of today's PDAs. In September 1998, the Acorn Workstation Division was finally closed. Acorn changed its name to Element 14, farmed off RISC OS and the computer hardware went to Castle. The end came when Element 14 finally sold out to Broadvision in November 2000. Fortunately, the legacy of Acorn lives on and the machines can regularly be bought at auctions for a fraction of their original price.

## Playing games

With the BBC heavily promoting computer literacy, the early eighties were a good time to pressure parents into buying a computer on the grounds that it was for educational purposes. Having managed to obtain discounts for their own computer labs, schools were also keen for students to have similar if not the same computers. Guilt on behalf of the parents resulted in many a BBC computer being sold "To help with your homework".

Yes, the hardware was superior to everything else and you could dream of building robots, but once you got your hands on a BBC, your only goal in life was to get your hands on some software. And I'm not talking about Happy Number, Wordhunt or any other edutainment program. The games might not have been as numerous as on other machines – Spectrum and Commodore users had an almost never-ending supply of new titles – but relative lack of quantity certainly didn't mean lack of quality.

Acornsoft started the ball rolling with an initial launch of clones of arcade games such as Hopper (Frogger), Meteors (Asteroids) and Planetoids (Defender). Occasionally a cloned game was better than the original, as with Superior Software's Repton series. The original was a straightforward clone of Boulderdash, but the sequels expanded greatly on the gem-collecting concept.

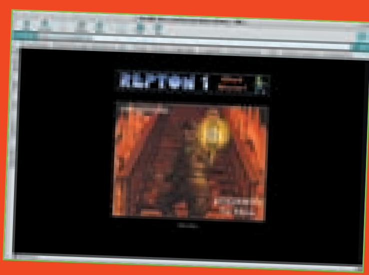
Ultimate ported many of its successful games to the Acorn machines, but the most memorable titles are those that began life on a BBC. Geoff Crammond's Revs skidded in in 1985. Crammond had previously written a flight simulator and he used a similar screen layout with a fixed cockpit view for Revs. Racing a Formula 3 car against 20 computer-controlled opponents around a single track

## Online Resources

The Acorn computers are well represented on the Web, although the best places to find software and hardware are not necessarily the most obvious. Dave Edwards, editor of the Electron User Group disk magazine, reveals the best sites to visit for your Acorn fix

### Stairway to Hell (www.stairwaytohell.com)

One of the biggest emulation sites for the Acorn 8-bit range out there, Stairway to Hell is without question the place to go to relive any BBC or Acorn Electron games on your PC. There are thousands of disk and tape images to download – all illustrated with screenshots and scanned front covers – and sections dedicated to instructions, magazines of the era, solutions, unreleased games and a whole lot more besides. Despite the demonic associations the name conjures up, Stairway to Hell was originally one of the early platformers available for the BBC machines.



### 8-Bit Software (www.8bs.com)

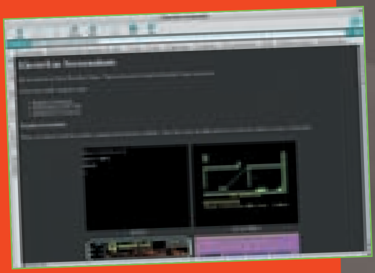
8-Bit Software is primarily a Public Domain library for the BBC and it currently has 1,664 disks available to download. It is also the site that has been going the longest, beginning life as a disk-based magazine for the original BBC machines and making the move online in 2001. As is the nature of PD software, the quality of individual programs varies considerably from disk to disk, but all are handily stored in separate catalogues so you have a rough idea of what to expect from most of them. The site also has lots of hardware and software information.

### The BBC Lives (http://bbc.nvg.org)

The BBC Lives is another huge site for, you guessed it, the BBC series of machines. Primarily a text-based website, and so not as attractively presented as some others, it maintains an extensive library of both ROMs and software for the Beeb, although some jiggery-pokery is necessary to use its files with some emulators. Additionally, it offers a large variety of tools to assist the user in some of the more advanced exercises in emulation, such as converting a .bmp image to a BBC screen. It also maintains the all-important list of links to external emulation projects.

### Acorn Electron World (www.acornelectron.com)

Acorn Electron World is the latest archive site and focuses almost exclusively on what many call the 'baby BBC'. It contains a large catalogue of 'exclusive' disk images. The disks contain not just the game but text files containing instructions, reviews and, where possible, a solution. It also has all this information in HTML format plus a huge Public Domain section featuring discs from A&B Computing, Acorn Programs, Electron User and the Electron User Group. It's let down a little by its 'work in progress' look.



(Silverstone) may sound limited, but it proved to be a compelling challenge. Why was Miles Behind, one of the set drivers, always able to overtake you? A later version added another four circuits, but the original seemed to play the best.

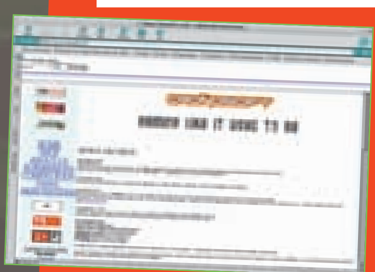
Some of the games were off the scale of normality. Frak! by Aardvark Software was a platform game with cutesy graphics. You played a caveman who had to whack bug-eyed monsters with a yo-yo! It was very slow to play, but was one of the first games to use sprite graphics. If platform games were your thing then Chuckie Egg was the game to get. The graphics weren't great and the eight levels were replayed three times with increasingly tougher baddies, but it was so perfectly playable. If you wanted better graphics you turned to Alligata's Blagger, a Manic Miner clone with smoother graphics.

For real atmosphere you had to play Cholo by Firebird. Featuring black and white vector graphics, this 3D adventure transported you to a futuristic world where you were trapped inside a nuclear bunker. Controlling a robot upon the ravaged planet's surface, you had to find other robots to help you break out of your prison. Equally good, if not better, was Exile. Released by Superior in 1988, you played a space ranger stranded on a distant moon. Exploring a vast network of caverns, you had to rescue fellow survivors, overthrow the local space pirate Triax, and escape.

Of course, back then games weren't all about graphics. Text adventures could seriously task your cerebral faculties. Peter Killworth wrote many such games, which were originally published under the Acornsoft label before going to Topologika. His Philosopher's Quest overcame the limited text parser with plainly bizarre plots and puzzles. Castle of Riddles was just as tough with puzzles so hard you cried, screamed at the screen and phoned everyone you knew in the hope that someone might have solved it. Twin Kingdom Valley by Bug-Byte was a Hobbit-style adventure with both text and graphics to keep you amused. The parser was much stronger than the Acornsoft adventures and the descriptions were very well written. It was easier to complete than Philosopher's Quest, but then not everyone wanted the mental agony.

The parser that beat all others though, was by Level 9 who specialised in text adventures. Ian Buxton and Sue Gazzard wrote the wonderfully descriptive Lords of Time, but my personal favourite though will remain Red Moon in which you had to find an elusive crystal in a magical land. RG*

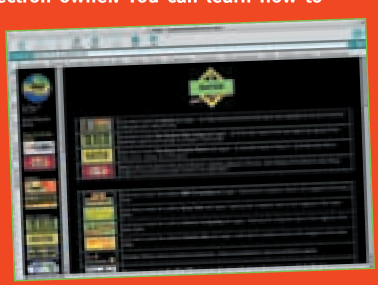
## Cronosoft (www.cronosoft.co.uk)



The homegrown software industry lives on in the guise of Cronosoft, which has steadily gained a respectable reputation for supporting the Spectrum over the last few years. It has now branched out with its first game (on cassette of course! – for the BBC and Electron) – a nice Lemmings-style number called Weenies that can be ordered for £3.99.

## ElectrEm (http://electrem.emuunlim.com)

ElectrEm is the best-known Electron emulator and this page, maintained by its author, includes not only the download but also tools for the bona fide Acorn Electron owner. You can learn how to convert your old programs into the .uef (tape image) format that ElectrEm recognises, or even learn how to feed back downloaded files to the real thing. The author's heavy-going technical section on how the emulator came into being is probably for real fanatics only though.



## Superior Interactive (www.superiorinteractive.com)

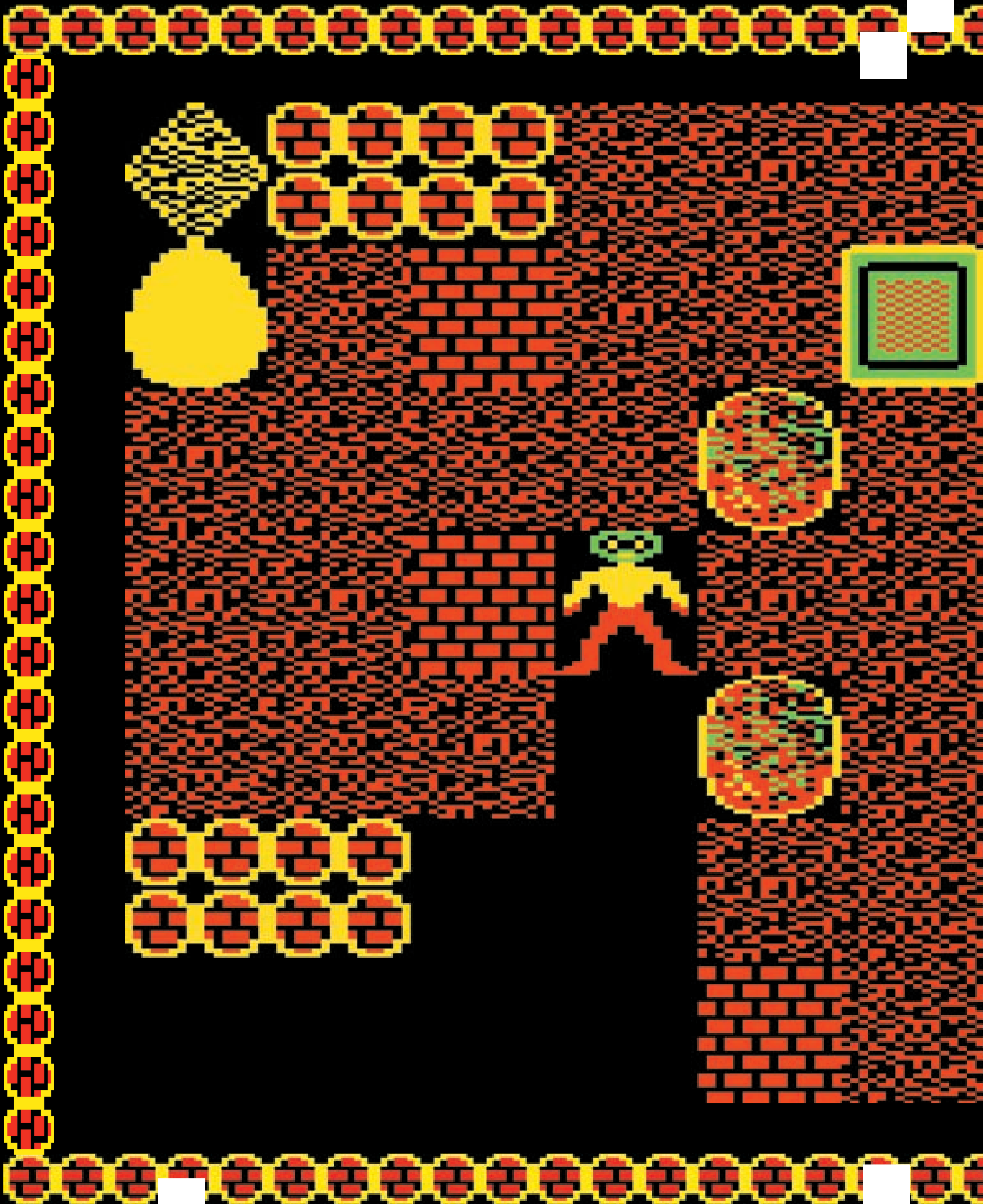
This is the new website from Superior Software. This software house was the daddy when it came to BBC and Electron software in their heyday, releasing many classic titles from Elite to Exile. It has now converted three of its old favourites, Galaforce, Repton and Ravenskull, to the PC and this site is almost entirely an advertisement for them. What it doesn't tell you is that many of its old BBC and Electron compilations are in fact still in stock. So before you bid a fortune for that 'rare' copy of Elite on eBay, you may consider buying it brand new instead.

## eBay (www.ebay.co.uk)

Talking of eBay, you can pick up lots of 8-bit Acorn software and hardware from the Web's biggest auction house. Prices vary enormously, with cracked-case jobs selling for pennies, and rare boxed BBC variants (such as the Acorn Electron Merlin) selling for hundreds. You're practically guaranteed to find the big box Acornsoft games any day of the week, but tracking down a 'real' version of anything else will be something of a challenge. Of course, buying (and selling) on eBay is an art in itself.

## And finally...

If you want to get hold of the genuine articles and don't fancy the bidding rigmarole of eBay, there are several other outlets in which 8-bit memorabilia is on direct sale. Several shops deal in retro computing, including High Street Micro (www.highstreetmicro.co.uk), Computer Cavern (www.computercavern.co.uk) and Trade-In Post (www.tradeinpost.com), and they have all posted their catalogues online. In addition, Retro Trader (www.retro-trader.com), UK Retro (www.ukretro.co.uk), Retro Gamer (retrogamer.merseyworld.com/fscomp.htm) and Vintage Computer (www.vintagecomputer.co.uk) all have spare BBC and Electron software in their cupboards. And if you don't fancy paying for antique equipment at all, the classified ads of Micro Mart (www.micromart.co.uk) and Acorn Cybervillage (http://acorn.cybervillage.co.uk/noticeboard.stm) also occasionally list BBC and Electron goodies 'free to a good home'!

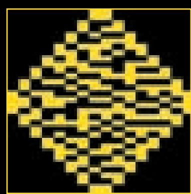


# >Repton Retrospect

Richard Hallas digs back thru time to unearth the puzzling life of a popular green lizard, Repton, which first came to prominence on the BBC Micro but has since made the jump to most other popular platforms, and still remains healthy on today's PCs, PDAs and mobile phones

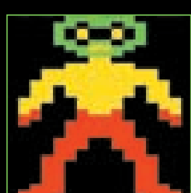
It's fairly uncommon for any computer game character to become so popular that it survives for more than a couple of sequels before becoming tiresome and fading from sight. Game characters and indeed game producers are ephemeral – they tend to surf a wave of popularity for all too short a time before sinking without trace. For a single computer game character to stay active and popular for nearly two decades, and to remain associated with its original publisher for all that time, is almost unheard of... almost.

For that remarkable record has been achieved by Superior Software with its Repton series of games. At the time of writing, Repton is 19 years old and still going strong. New Repton games continue to be developed and published by Superior and its associates. Indeed, Superior Software has remained continually active for even longer. Founded in 1982, the Acorn business still makes sales, though the primary business is now conducted by Superior Interactive (**www.superiorinteractive.com**), specialising mainly in PC software. Richard Hanson, one of the co-founders of Superior Software, now runs Superior Interactive and suggests that its 22-year existence to date "must make Superior one of the longest-running games software companies in the world."



It seems implausible that there could be any readers who have not heard of Repton, but in case any such people do exist, here's a very brief recap of what it's all about. The eponymous lizard is on a mission to collect diamonds, but is hampered by falling rocks, monsters that hatch from eggs and other hazards. The correct route through a series of increasingly difficult levels must be devised so that all the required objects can be collected and puzzles solved, often within a time limit, without getting Repton trapped or killed or rendering essential objects inaccessible. Although there can be frenetic moments, Repton is basically a very challenging puzzle game that requires logical thought to solve, and so appeals to players of all ages. The original game was hugely popular and was followed by three numbered sequels and several unnumbered ones, including expansion packs and multiple rewrites.

## >Repton (1985)



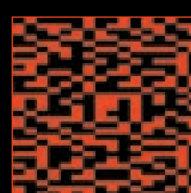
At 19, the Repton character is already three years older than its creator, Tim Tyler, when he wrote the first game in the series. Although it is sometimes assumed that Repton is a version of another game, Boulderdash, there is little truth in this and the two games are actually very different. Tim got his original idea for Repton from reading a review of Boulderdash, but that was the extent of the earlier game's influence: "I didn't actually see Boulderdash for another 10 years or so, but the review was the inspiration."

Even though only 16, Tim was already a published game author. His first game, Moon Cycle, had been released by Superior Software under the title BMX on the Moon, and he wrote a further couple of unpublished games – Cosmic Debris and Pink – before dreaming up Repton. He first learned about computer programming from a magazine article and started out with a BBC Micro Model B at the age of 13. His friends had them and played games on them. "They were obviously very cool things to have."









The precise origins of the Repton character and name are fogged by a shroud of failing memory, but Tim thinks that they were at least partially a product of the BBC Micro's hardware limitations. Perhaps the most frustrating aspect of the 32Kb BBC Micro, certainly for game authors, was the very limited amount of RAM available and the fact that the screen display required a substantial portion of what little there was. In order to have even a vaguely reasonable amount of memory to hold the game code and data, the programmer had to sacrifice screen resolution and colours. Repton used just four colours in any given level (three plus black), and since the BBC Micro boasted only eight primary colours, and offered no flesh tones, Tim decided that a green-skinned reptile would make a good hero for an underground game featuring rocks and monsters. The name Repton came from the 'rept' of 'reptile' with a technological '-on' as a suffix.

The writing of the game happened in a frenzy of programming activity over the space of not much more than a month. However, Tim's lasting memory of the process is of how bad his programming was: "For example, I didn't use a level editor. Instead I drew the levels on a piece of paper, converted the characters to numbers in my head and typed them in – in binary! Editing was a similar process."

Tim may have reservations about the quality of his programming, but there were certainly no visible problems in the

game itself. Every aspect of it seemed polished and exuded an air of quality. The scrolling of the screen was ultra-smooth, the graphics were slick, the music, though inevitably repetitive, was a well-implemented two-channel snippet of ragtime music with no duff notes in it, and the gameplay was compulsive. The simple objective of collecting all the diamonds within a time limit, combined with challenging puzzles, made for an exceptionally well balanced game.

### Superior by design

The quality of the game was evident to Richard Hanson at Superior, when he received it on a cassette through the post in early 1985. Richard evaluated the game with his Marketing Manager, Chris Payne, and recalls that “we looked at the game and decided that it definitely had the makings of something special.” Repton arrived in a very polished state, but it lacked the password system that allowed players to start on any of the 12 levels rather than having to play them all through in sequence. A password system was considered to be important, so Tim was asked to add one along with a few other smaller changes. Aside from these improvements, the game was ready to publish and came out just a few months later.

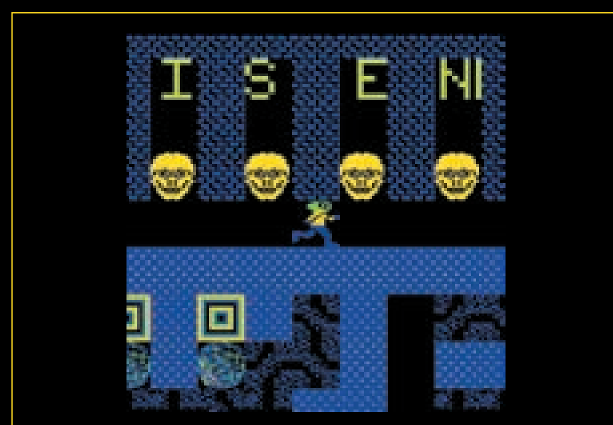
Richard Hanson remembers it fondly: “We considered it be an excellent, thought-provoking game, but I don’t think Chris or I realised just how great a success the Repton games would become. The original 12 Repton levels were perhaps a little too easy, but in some respects that is better than a game that is far too difficult.” Not all the levels were too easy, though: “Players tend to get stuck on two levels in particular – Octopus and Giant Clam. Octopus is a brilliant level which, I am told, has even perplexed some chess grandmasters. Tim handled the progression of difficulty from one level to the next extremely well, and cleverly arranged the gradual introduction of new game features as the game progresses.” The levels were considered to be spot-on from the outset, and no level-design changes were necessary prior to publication.

Repton was the first Superior game to feature a prize competition, with a £100 reward for the first person to submit a photograph of the congratulatory end-game screen. Repton achieved excellent sales, but perhaps it was a little on the easy side – speaking for myself, I got it as a Christmas present in 1985 and completed it on Boxing Day! Feedback from players soon indicated that a sequel was required, and so Superior went straight back to Tim and asked him to write another.



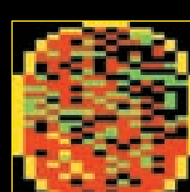
## >Repton 2 (1985)

The second game was also written in short order, in a month and a half of effort, and was released towards the end of 1985. As with the first game, all the features and design came from Tim Tyler, but the sequel marked quite a departure from the original. Rather than featuring a series of consecutive levels of progressive difficulty, Repton 2 had just one enormous level. The objectives were still similar, in that you had to collect all the diamonds and kill the monsters that chased you, but now there were lots of other elements too, including jigsaw puzzle pieces to collect, spirits to trap in cages and transporters that took you from one area of the map to another.



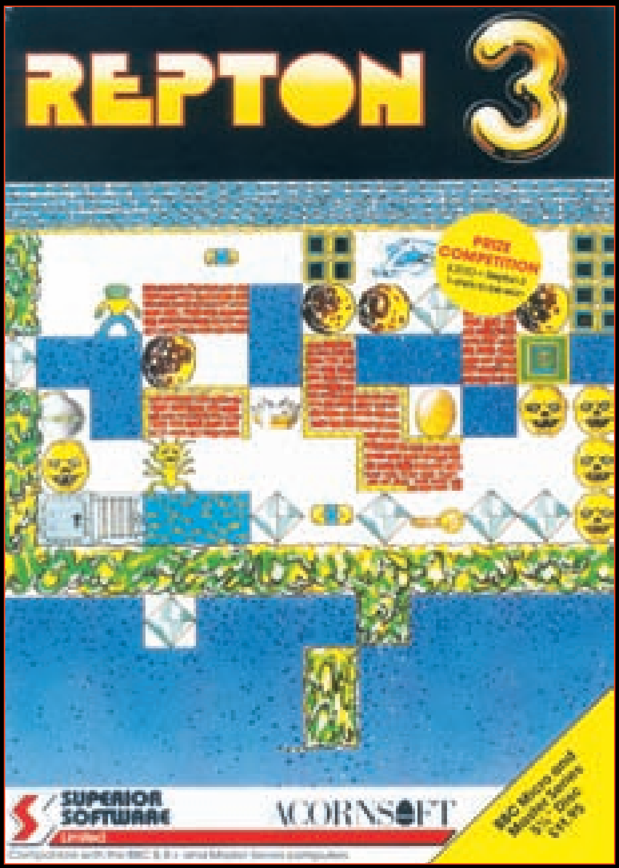
Repton 2 was another big success for Superior, but unlike the first game it had a few problems. As well as rewriting the boulder-falling algorithm in a way that slowed the whole game down, Tim failed to test the game as carefully as he should have done, with the result that it was impossible when first released: “Unfortunately one diamond was ‘hidden’ under a transporter and was impossible to collect, a cause of much embarrassment all round.” This was particularly unfortunate because there was a £200 grand prize, plus T-shirts for the first hundred people to complete the game. Superior fixed the bug in new copies of the game and replaced the software for users who contacted them, and eventually the prize was won.

If Repton 1 had been a bit on the easy side, Repton 2 went to the other extreme – it was exceedingly difficult. To complete the game required careful and detailed planning, and a single slip-up could easily render it impossible, meaning that you had to start all over again. Nevertheless, it was a runaway success for Superior and enhanced Repton’s reputation even further. Once again the fans were clamouring for a sequel, and once again Superior approached Tim Tyler to write it.



However, sudden success can have unpredictable effects on a youngster. Although many programmers in Tim’s position may have jumped at the chance to rework a bit of code




and make lots more money, he was growing tired of Repton. "I had more money than I knew what to do with, and lost interest." With hindsight he may have regretted this decision slightly, as Repton 3 turned out to be the most successful game of the entire series, but at the time he'd had enough of his creation. He agreed to design some of the levels for the new Repton 3 game, however, even though he considered designing levels "the least fun bit".

## >Repton 3 (1986)

Superior needed to find a new programmer for the next game, and reviewed the ones on its books. Matthew Atkinson was approached because he was considered to be highly reliable. He recalls discussing the project with Richard Hanson and being told, with a Yorkshire frankness, that "you're not the best programmer on our books but you live locally and you're dependable."

Matthew's first introduction to computers was at Keele University in 1981. A friend in his hall of residence had an Acorn System 1 computer which sparked his interest. He already had an interest in electronics, having built a TV tennis game from a design in Practical Wireless a few years before, and he saved up for an Acorn Atom in kit form and assembled it himself. The next logical step after that was a BBC Model B. His first commercial project was a BBC conversion of Tempest for Atari to publish, but circumstances altered when Atari changed hands and the Tempest conversion ended up being released by Superior.

When Superior approached him to write Repton 3 he was unaware of the success the first two games had enjoyed, and what a rare opportunity was being offered to him. The excellent quality of the existing games soon became clear to him, though: "My aim was really to try and match the standard. I feel I fell a bit short on the scrolling. You can see the refresh on the screen." Matthew received a few notes from Tim on how the screen compression was done, but in all other respects the new game was created by a combination of reverse engineering and





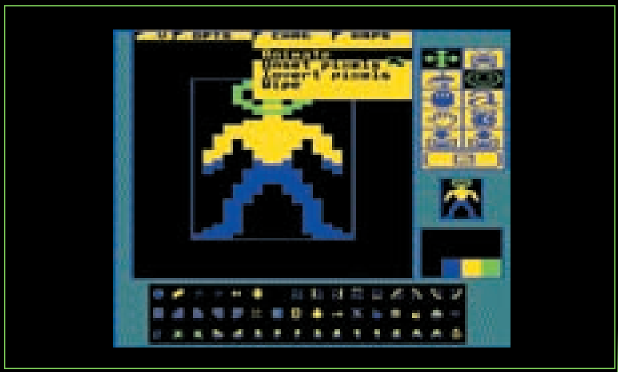
reimplementation. Repton 3 was released to great acclaim a year after its predecessor, in time for Christmas 1986, and proved even more successful for Superior than the first two games had been.

## Third strike

In terms of content, in many ways Repton 3 was a return to the style of the first game. The huge levels and enormously long sequence of tasks of Repton 2 had been abandoned in favour of a return to a sequence of smaller levels of increasing difficulty, with a password system just like the original. However, the game was refined somewhat. Spirits, cages and transporters were retained from Repton 2, and there were now crowns to collect and time bombs to diffuse. Repton 3's difficulty level fell somewhere between the previous two games.

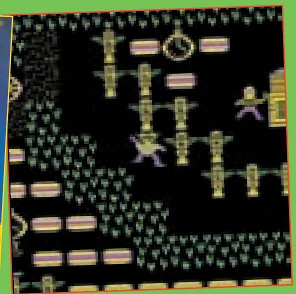
The major innovation of Repton 3 was the inclusion of a level editor. Although specified from the outset by Superior, this was all Matthew's work, and he wrote it in the style of an early WIMP (Windows, Icons, Mouse, Pointer) application, as WIMP interfaces were becoming popular at the time. Besides adding support for mice and trackerballs as well as keyboard input, the editor added a new degree of scope to Repton 3 and gave it far more longevity than it would have had otherwise.

Indeed, the editor turned Repton 3 into a bit of a cash-cow for Superior, as there was an insatiable appetite for new levels from Repton fans, and the fact that both the levels and the graphics could be changed permitted Superior to release new level packs easily. This was an innovative thing to do at the time – as it was uncommon for mid-80s games to have editors and expansion packs – and anticipated a modern trend by several years.



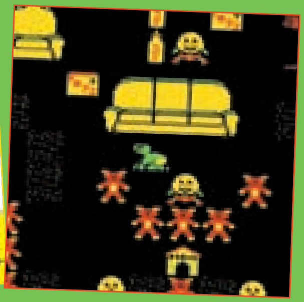
## >Level up!



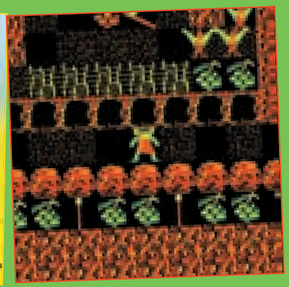
**Repton 3 contained twice as many levels as Repton, having 24 rather than the original's 12. The levels were grouped into three sets of eight, with music-related titles for each group (Prelude, Toccata and Finale). Each expansion pack, though, gave even better value by providing five sets of eight levels. The first pack to appear was Around the World in 40 Screens (comprising America, Arctic, Orient, Oceans and Africa) in 1987. Later in the same year came the Life of Repton (Baby, School, Teenage, Work, OAP), and the final expansion was Repton Thru Time (Prehistoric, Egyptian, Victorian, Now, Future) which appeared in 1988.**



**Many people were involved in the design of these levels, according to Richard Hanson, "particularly Steve and Mark Botterill, and Graham Dubber, a customer who sent some excellent new Repton 3 level designs to us." The packs were also good news for Matthew Atkinson, whose code was inevitably used in each one. "They were great, as they were easy money! On another level they breathed extra life into a game that might not have been around for too long but for the editor."**



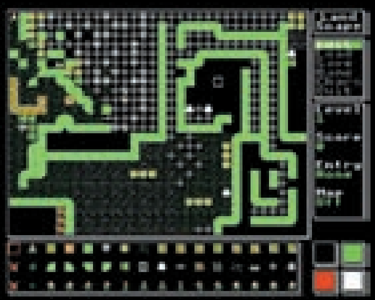



# >Repton Infinity (1988)



Repton Infinity started life as an editor for Repton 3 that Dave Lawrence wrote in 1987. This was a sophisticated affair that allowed you not just to edit maps but to play-test them, trying them out and altering them freely in real time before saving the files and reloading them into the real game. Having produced such an advanced editor, the next logical step was to consider how the objects and characters in the game could be scripted, thus allowing an 'infinite' variety of games to be created, hence the name Repton Infinity. Superior was already considering a 'proper' new Repton sequel, rather than just another set of new levels, when Dave Lawrence came along with his sophisticated editor idea, and so it was agreed that this would become the next release in the series.

Dave Lawrence and Dave Acton had met in the offices of Acorn User magazine in around 1986 and went on to collaborate on many projects (indeed they still work together today). Work started on Repton Infinity in January 1988 and it was launched before the end of the year. It may have been one of their earlier collaborations but it was certainly an ambitious one. Repton Infinity was not just a game with an editor, but rather a completely scriptable game engine with its own programming language, REPTOL. It comprised of several separate components: Blue Print, the game creator; Film Strip, the character designer; Land Scape, the level designer; and File Link, a linker to tie the components together. Plus, of course, there was a menu system and a selection of predefined games to play.



These games included a so-called Repton 3 to show that the previous game could be remade under the new system (though it included new levels) and Repton 4, which featured the Repton character but enhanced the game's scope (one objective was to photocopy a ghost!). There were new-style games, too. Robbo starred a robot and Trakker featured a bulldozer. Both played quite differently from standard Repton.

## Code cramming



As Dave Lawrence recalls: "While Dave Acton worked on the language editor, compiler and optimiser, I concentrated on the map and sprite editors. I also wrote the linker and menu system. We both worked on the innards of the game." Getting all these components to work together on a BBC Micro, with its severe memory constraints, was no mean feat either. "The hardest task was simply cramming everything into the tiny amount of memory in the BBC. A large portion of time was spent desperately hand-optimising the game code to fit into available memory. Quite regularly we'd trawl the source code for methods of saving a byte here or a byte there."

Repton Infinity's REPTOL compiler was clever enough to be able to optimise and shorten the code, enabling it to run faster and fit more instructions in the limited available memory. The game engine could cope with cascading transporters and conveyor systems, and was theoretically sophisticated enough to allow other 'real' games of the time (such as Pacman, Frogger and Pengo, and Superior's Bonecruncher and Pipeline) to be reimplemented, even if in a somewhat limited way.

All this power and flexibility came at a price, though. A BBC Master with disk drive was needed to make the most of the game, and even then the game engine demanded just a bit more power than the hardware could deliver. "Our constant nag was the speed. The Repton 3 levels did run at an acceptable speed (although far slower than the original game!) as the characters were simple and REPTOL did not have much to do. The other levels we provided had many more complicated objects and the poor old 2Mhz 6502 just couldn't really cut it."

Even so, the game's remarkable scope and innovation made it one of the most technically impressive releases of the 1980s, and certainly one of the most under-appreciated. Repton Infinity was one of the elite group (pun intended – the others being Elite, Revs and Exile) to be marketed by Superior in a big video-style box at a price of £15 (then the top price for a game). Repton Infinity probably failed to achieve the success it deserved because it appeared quite late in the life of the 8-bit Acorn range. Indeed, the impressive 32-bit Archimedes had been released by this stage.

# >Ego: Repton 4 (1992)



Superior's last foray into a new setting for Repton was the little-known Ego: Repton 4, which was written by Gary Partis. Gary is perhaps best known for his long list of classic BBC Micro games such as Psycastria, Syncron and Sphere of Destiny. He started out with his school's Commodore PET in 1981 at the age of 13, but got a BBC Micro a year later (a Model A, which he soon upgraded with extra RAM). He began programming games right away and had his first effort, a shoot-em-up called Positron, published by Micro Power in 1983. Amazingly enough, he also sold Turbo Charged Compiler to Micro Power at the same time, but it was never published because of its high system requirements: "It needed a disk drive, which was a luxury in those days! The compiler, however, compiled most Basic programs into machine code. It was rather neat, really!" He continued to write games through his school and university life, and ended up working for Tynesoft until its closure in 1990. Ego: Repton 4 was the last game Gary Partis ever wrote: "I had no intention of writing any more games after 1990, but Richard Hanson approached me in 1992 to do this conversion."

Curiously, the game started life as a Commodore Amiga and Atari ST game called Personality Crisis, which Gary had written two years earlier, but it was released exclusively for the Acorn Archimedes as a new Repton game in time for Christmas 1992. Being a conversion of an unrelated game, Ego was a complete departure for the series and bore no resemblance to the Repton 4 game that appeared as part of Repton Infinity, or indeed any other Repton game.

In Ego the graphics were presented in pseudo-3D with a top-down view, as though the player were floating some distance above Repton's head. There were still diamonds to collect and transporters, but there were no falling rocks, and Repton had to avoid such hazards as robots running along set paths. The objective of each level was to pick up the 25 square pieces of a jigsaw and place them in the correct positions on a grid in the centre of the level to form a picture. Repton 4 was quite well received but it lacked the logical challenges and hence much of the appeal of the earlier games.

# >The platform game

**By 1988, the 8-bit Acorn machines were looking outdated and their market was dwindling. Superior needed to explore other platforms, and it was a logical choice to take Repton to new machines. Repton 3 was released for the Commodore 64 in 1988, whilst the first two games were converted to the Spectrum and released in a double pack called Repton Mania in 1989. These were reasonably successful but not huge sellers, as Superior's brand name was not well known beyond the Acorn market.**

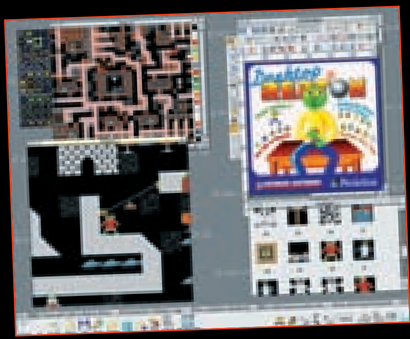
**An Acorn Archimedes compilation of Repton 3 and its three sets of expansion levels was also released in 1988. The Archimedes conversion was interesting because it added a few features and subsequently underwent a second major revision. John Wallace did the conversion work largely for his own amusement, and in fact rewrote all of the first three Repton games, though only his Repton 3 conversion was published by Superior: "I originally produced these upgrades so I could continue to play them when I acquired my Archimedes. Subsequently Superior Software agreed to market my Repton 3 if I provided an editor, but it looked after the music and additional artistic work."**

**John's conversion had enhanced graphics with a 16-colour display, but more importantly it featured a 'save and recover' feature which enabled you to save your position before attempting something dangerous. Then, if you made a mistake, you could go back and try again without having to restart. The original Archimedes release comprised of Repton 3 and its three extra level packs. But nearly a decade later in 1997, ProAction software, by arrangement with Superior, approached John to update his Archimedes conversion for the then current Acorn machine – the Risc PC. At this stage, John's conversions of Repton 1 and 2 were released as well as an updated Repton 3, and all the games featured the 'save and recover' feature (particularly handy for Repton 2!) and enhanced high-resolution graphics. John was an OAP when he wrote his conversions, which rather helps to underline Repton's wide appeal to all ages.**




The Spectrum was just one platform graced by our reptilian diamond-eating friend

# >Desktop Repton (2001)



Aside from the rejuvenated 1997 re-release of RISC OS Repton 3, it looked for many years as though Repton had made his curtain-call. But Darren Salt, a RISC OS and Linux programmer, had the idea that a multitasking desktop version of Repton would be a nice idea, so Repton 3 took on yet another new lease of life. The previous RISC OS versions had taken over the entire screen and not made use of the excellent desktop interface, so a version that ran in a window and had a proper multitasking editor seemed overdue.

Darren therefore set about rewriting the game once again, with reference to the 1988 Archimedes release. The writing took only a couple of months in total, though it was done sporadically over several years. Realising that there was probably some money to be made out of it, he approached ProAction (publisher of the 1997 RISC OS Repton games) in 2001 and the game was soon released. Aside from working in a window and having an integrated editor, Desktop Repton is a completely faithful recreation of Repton 3 which includes exact copies of all the original graphics. It continues to be developed – a recent update adds high-resolution graphics and it is hoped that a new version later this year will include all the Repton 1 levels and Repton 2.

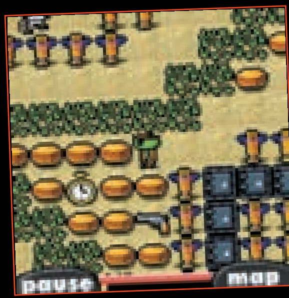
# >The future

Following the forthcoming Repton 3 release for PC, Superior is planning various future Repton projects. As well as extra levels, a brand new version of Repton, with extra game features and adversaries, is on the way. A 3D version may possibly appear – a provisional version is now under development. Any Linux and Mac OS X programmers reading this article may like to know that Superior Interactive is interested in exploring those platforms, too.

So, at 19, Repton is clearly alive and well. It's also interesting to note that the game's original creator, Tim Tyler, has not quite tired of the format yet, as he has written a new game called Rockz in Java, featuring a very familiar-looking central character. You can play it as **www.rockz.co.uk**.

# >Mobile Repton (2002)

The story of Repton does not end with desktop computers, however. Recently our friendly lizard has made the jump to mobile phones and PDAs, thanks to a collaboration between Superior and Masabi. It all came about through the efforts of a pair of school friends, Tom Godber and Ed Howson, who used to be interested in the BBC version of Repton. Tom worked as a programmer for an enterprise software company during the dotcom boom, but was a casualty of the following bust. Ed worked for a PR firm representing Psion's software arm, Symbian. His experience of the mobile market led him to consider games that might be suitable for the emerging mobile games market, and Repton seemed like an ideal candidate. Tom and Ed founded Masabi and approached Superior in late 2001. Richard Hanson claims to be "very pleased with the fruits of this partnership so far. I am extremely impressed with their knowledge and expertise."




So far, the original Repton has been recreated, and is available for use on a wide range of phones (both mono and colour) and PDAs. The main programmer is Dave Hampson, though Tom has contributed elements. The game conversion is absolutely faithful in terms of design and gameplay, as Dave Hampson used a BBC emulator he had written to ensure identical game logic. The game has a few enhancements, the graphics have been improved and there are now 16 levels rather than 12, plus a further four new tutorial levels. Repton was first released in both PocketPC and mobile phone versions in late 2002, and since then the range of supported phone and PDA platforms has expanded considerably. Due for imminent release is Repton Worlds, which is essentially Repton 3 with the three expansion packs (40 levels each) and two sets of new levels for the original game to bring its number of screens up to 40, too – the original Prelude, Toccata and Finale levels have been supplemented with new Overture (tutorial) and Encore levels.

## Portable problems

Writing a mobile version of Repton has provided some interesting challenges thanks to the range and variable nature of the devices on which the game needs to run. Different phones and PDAs have different screen resolutions, some are in colour whilst others are in mono, and they use various different processors and hence run at different speeds. Dave Hampson's Repton engine can easily be adapted to a wide range of devices, though the implementation needs to be tweaked for each one. Screen size is an important issue – for each device a compromise must be made between

character detail and being able to see enough of the level to make the puzzles possible. Also, the game speed has intentionally been slowed down because of the fiddly buttons on mobile devices.

Another interesting challenge is the amount of memory available. Most phones allow only around 20Kb for games, which means that, in the case of Repton Worlds, there is enough room for the basic game and one additional set of levels. Tom has devised a system of 'micropayments' within the game, whereby players can buy another set of levels for a small amount of money (£1 or £1.50) and then have unlimited access to them.

Masabi has improved the games with hints, tutorial levels and detailed status screens. No instructions can be provided, so the games must be very quick and easy to learn by trial and error. So far the mobile Repton games have proved very popular with former BBC Micro owners, but Masabi is keen to expand far beyond that niche. Luckily the nature of mobile devices is such that sales in Europe, the US, China, Asia and indeed globally are possible.

## >Repton 1 (2003)



Superior Interactive itself has also been working on Repton again, this time in the form of an official PC version. Released as recently as December 2003, the new PC game features considerably enhanced graphics and lots of extra levels – 32 main levels rather than the original 12, plus 20 further levels for younger children (ages 3 to 9) and the first level editor for any version of Repton 1.

The new PC version was written by David Bratton: "I'm not exaggerating when I say that having the opportunity to program Repton has been a true honour. I have wonderful memories of playing Repton, and Superior Software is a huge part of my childhood as the BBC Micro was my first experience with computers." Darren Izzard provided a new arrangement of the music and significant graphical work, whilst Ian Rees and James Watson designed and tested many new levels.

Superior Interactive is also busy recreating other classic BBC games for the PC, all with enhanced graphics and many new levels. Repton 2 is due imminently and will include a level editor for the first time, and Repton 3 will follow shortly. Galaforce Worlds and Ravenskull have already been produced and Pipeline, Codename: Droid and Stryker's Run are on the way.

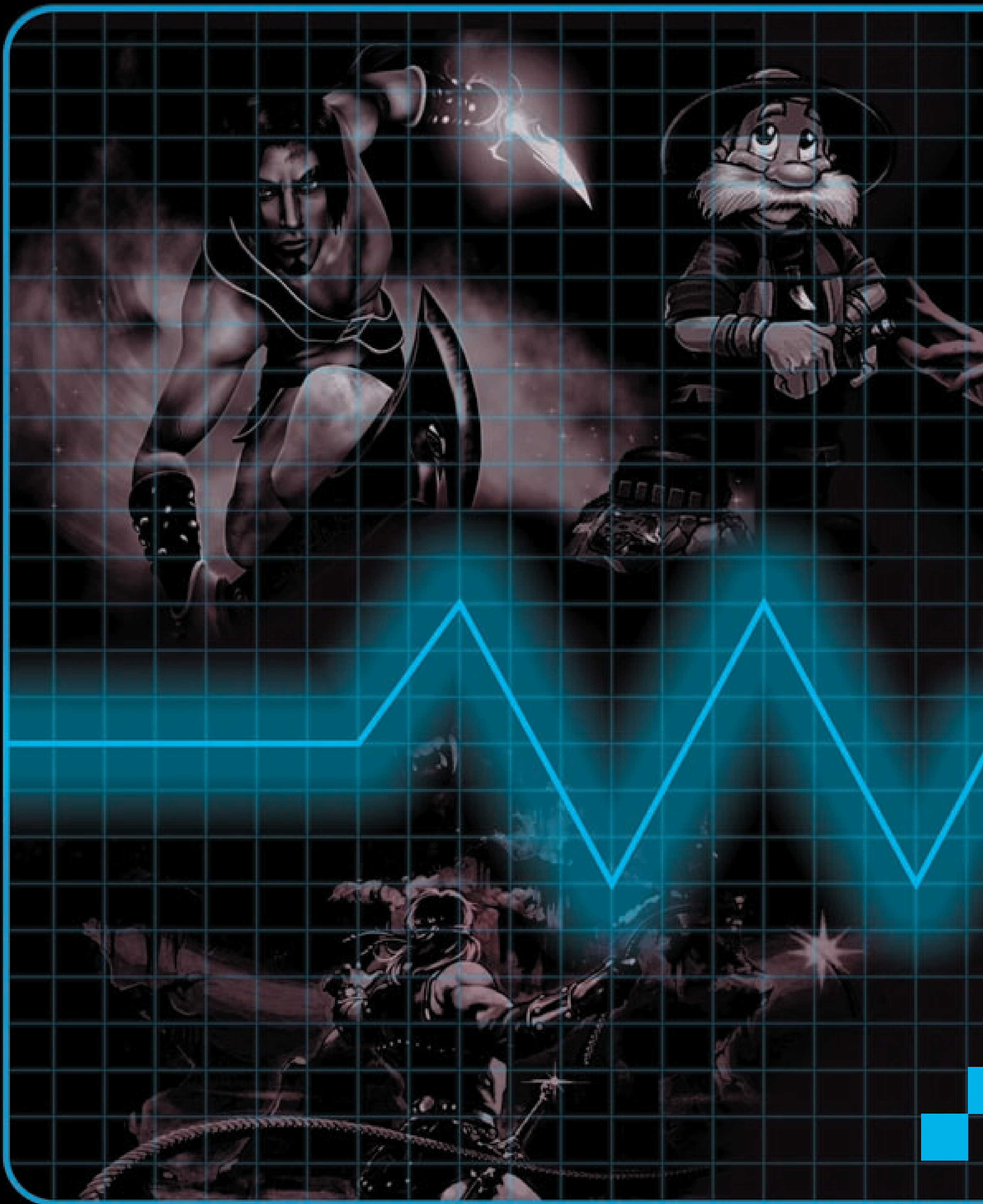
Richard Hanson stressed one particular point regarding the PC versions of the Repton games: "We have evened out the difficulty of the games to a great extent. Repton 1, which was relatively easy, is now more difficult due to the new levels. Repton 2, which was very difficult, is now a little easier thanks to a save-game feature. I believe we got the balance right with Repton 3 before, so we are keeping to the same kind of formula and simply extending the range of difficulty by including some easier levels and some more difficult ones." RG*

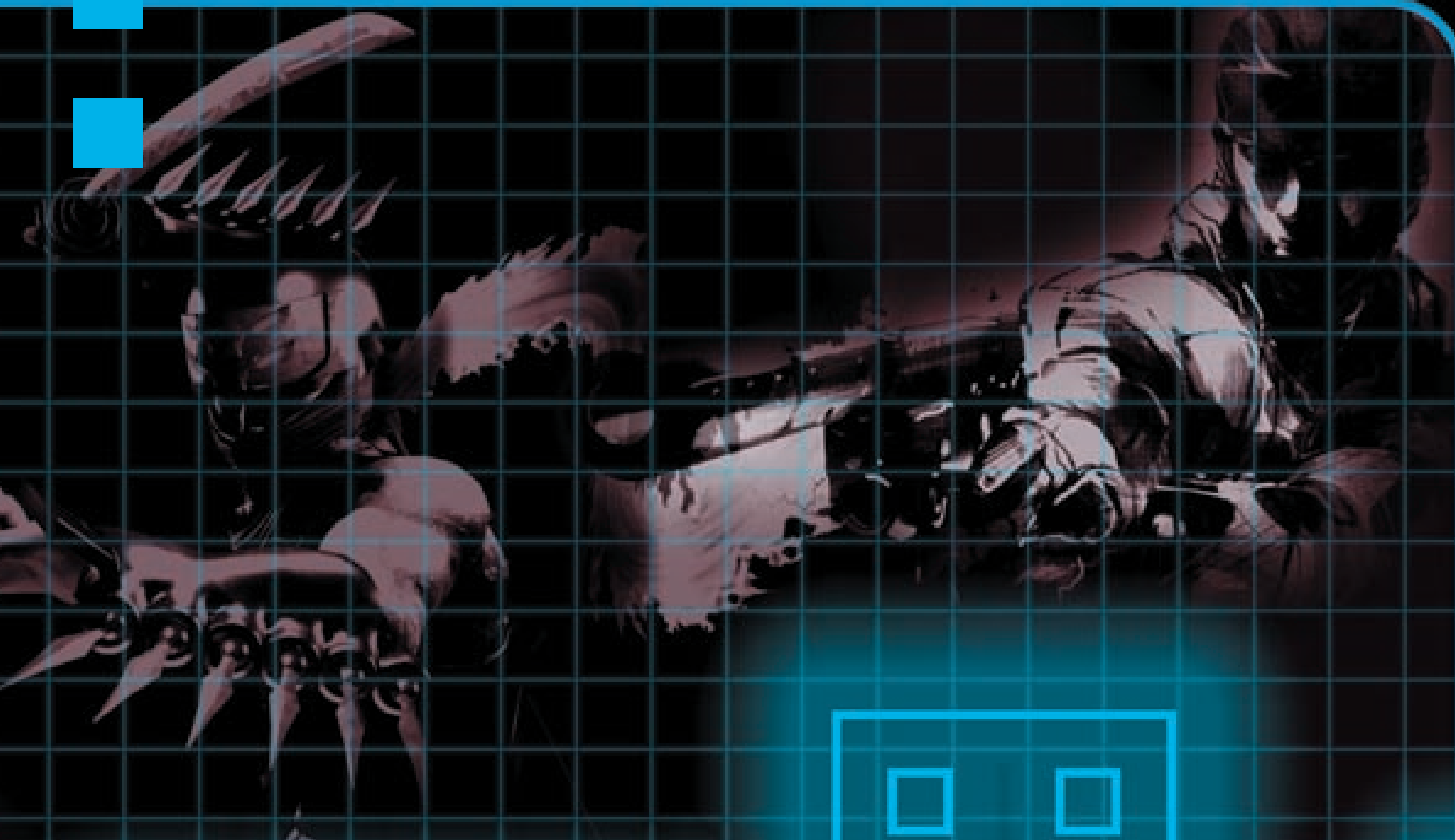
## >Repton Revelations

- **The classic Repton series of games sold over 125,000 copies in total**
- **Tim Tyler designed the original Repton 1 levels on paper and hand-coded the data in binary**
- **When first released, Repton 2 was impossible to complete**
- **Repton 3 topped Gallup's BBC Micro software charts for 12 weeks, eventually being displaced by Superior's Ravenskull**
- **The money that Matthew Atkinson earned from Repton 3 helped him to buy his first house in 1987**
- **After Repton 3, Matthew Atkinson wrote a game called UIM, which was a kind of 'underwater Elite'. He now works for Grattan, the catalogue company**
- **Despite its complexity, the entire Repton Infinity game source code is only 4,000 lines long**
- **Memory was so short on the BBC that Repton Infinity's components were compiled using Acorn's 65Tube BBC second processor emulator on an Archimedes A440**
- **The Master Compact version of Repton Infinity contains a 2,000-word hidden message. See if you can find it on this issue's coverdisc**
- **The default high scores names in Repton Infinity are all anagrams**
- **Dave Acton, co-author of Repton Infinity, has been seen several times on Channel 4's Countdown quiz show, winning the 32nd series and appearing again in a Champion of Champions contest**

## >Win Superior Software

Superior Interactive has kindly offered Retro Gamer readers the chance to win free copies of its PC titles. To be in with a chance of winning, simply visit: **www.superiorinteractive.com/special/retrogamer.htm** and sign up for the Superior Interactive newsletter.





# RETRO REVIVAL

It's 2004 and the retro revival is in full swing. Software publishers are scouring their back catalogues, looking for lost treasures to dust down and dress up. In looking forward, we look back at some of the retro properties making a timely return...







# Space Invaders

## To celebrate the 25th anniversary of their first strike, the Space Invaders hone in on the PlayStation 2

Wow. It's 25 years since Taito's Space Invaders first appeared in arcades. In wider history that's merely the blink of an eye, but when we're talking about videogames, a quarter of a century pretty much encompasses *everything*. Prior to 1978, there were no games of great interest besides Atari's Pong and Breakout. But then Space Invaders arrived in Japanese arcades and not only caused a catalytic explosion in the world of videogaming, but also established gaming as a cultural phenomenon.

In native Japan, the game was so popular that a national shortage of 100 yen coins occurred. The government had to increase production of the coin just to cope with demand. At the same time in the US, the spread of Space Invaders was so prevalent that the game was linked to an increase in juvenile crime levels. The 'powers that be' tried to have the game banned and the case even reached the Supreme Court before it was dismissed.

Since then, Space Invaders has spawned several official sequels and countless clones. Rarely a year has gone by in which the game hasn't been remade or repackaged. And now, 25 years after its original release, Taito has released the appropriately titled Space Invaders Anniversary.

### Old and new

The compilation includes nine different incarnations of the arcade classic, all selectable from a 1980's arcade. First up, you have the four versions of the original game. They are the upright version, the tabletop B&W version, the tabletop cellophane version and the tabletop colour version. In case you're wondering, the cellophane version emulates the coloured strips that were originally placed on the game's monochrome monitor to give the impression of colour. In a nice touch, the strips are stuck on slightly out, just as they often were in real life, so the colours don't match up exactly with the rows of invaders. All of the variations are perfect clones of the original game. Nothing has been tinkered with – the speed is the same, the thudding bass soundtrack remains, and the bugs that you could exploit as cheats are also there. If you're looking for the genuine article then this is it.

Space Invaders Part II is similarly faithful. There are two variations – upright and tabletop – and both are exact replicas. When the sequel was first released in 1980, the big draw was that the game sacrificed the cellophane overlay in favour of a colour monitor, so the alien invasion was now in true colour. In addition, a couple of new invaders were introduced: one split into two smaller invaders when shot, and the other flashed across the top of the screen and you could only destroy it when visible.

Finally, we have a small section of promotional material (adverts, manuals, development images etc) and three updated versions of the game. Doubles Mode is the same as the original, except that two players can plug away at the same time. Versus mode places players at opposite ends of the screen, and the idea is to clear away the aliens in the middle so you can line up a clear shot on your opponent. 3D mode recreates the game using wireframe graphics and can be viewed from several perspectives, including first person. These new modes add just enough variation to make them interesting, but fail in making Space Invaders Anniversary the well-rounded package it clearly wants to be.

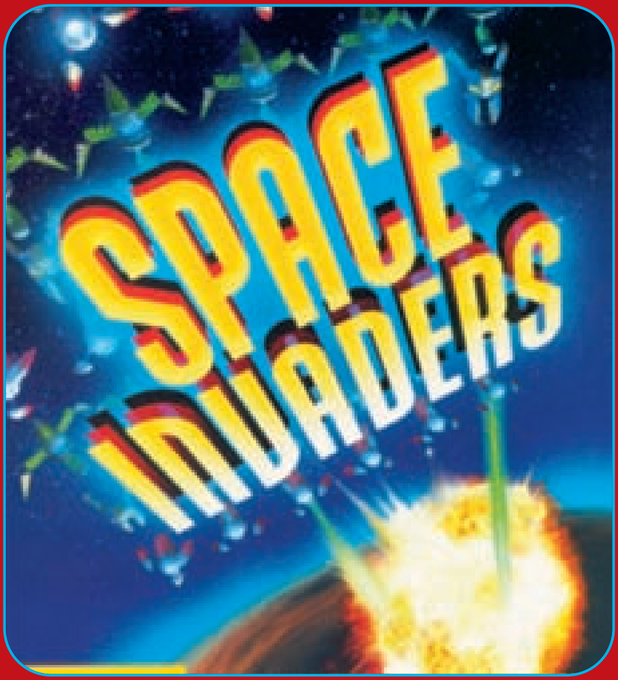
### Where are they?

Surprising omissions include Space Invaders Deluxe, Midway's US version of Space Invaders Part II that featured a cellophane overlay and a different scoring system. Also from Midway was Space Invaders II, an entirely different sequel that allowed for simultaneous two-player action. Perhaps the fact that Midway was involved has complicated matters, but what about Return of the Invaders (1985), Super Space Invaders '91 (1990) and Space Invaders '95 (1995), Taito's three official sequels? These follow-ups, which all featured improved graphics, gameplay variations and challenge modes (remember the cow protection mini-game in Super Space Invaders?) would have been the icing on the cake, making Space Invaders Anniversary the *complete* package for fans of the series. Interestingly, Space Invaders '95 is being released on the PC later in the year.

As it stands, Space Invaders Anniversary is not the full story, but an incredibly faithful retelling of the first chapter. PS2-owning retro gamers should certainly consider it, especially as it's available for £19.99 – and it will probably be worth twice that by the time the 30th anniversary comes around.

# Nishikado – san speaks

**Toshihiro Nishikado, designer of the original game and chief supervisor on Space Invaders Anniversary, talks about his world famous creation**




RG: What was your inspiration behind Space Invaders?

TN: Back then, Atari's Breakout was very popular in Japan, and I was addicted to it myself. I especially liked the gameplay elements, such as a sense of achievement at destroying the targets, and the tension that piles up when there's only one block left. I have included these elements into a shooting game, then began creating the game on an arcade board featuring microprocessors that were just emerging in the US. Originally I wanted to create a shooting game with a lot more movements, but the idea had to be reworked due to the limited hardware available. The alien designs were inspired by the Martians from The War of the Worlds – I remembered watching the film version in my childhood. In addition, I heard that a film called Star Wars was becoming very popular in the US, so I decided to create a space-themed game.

RG: What, in your opinion, is the secret of the game's worldwide success?

TN: I introduced a number of elements that were new in videogames. First, enemies respond to your movement and attack you. Before Space Invaders came out, most games involved non-interactive situations where the player unilaterally attacked the targets within a set amount of time. In Space Invaders, the enemies react to the player's movement and attack back. Also, even if the player survives the attack, the game is over when the Invaders reach your the bottom of the screen. I think these new elements made the game more thrilling, gaining it popularity among young players.

RG: Was the final game exactly as you intended or were there things you wanted to do but couldn't?

TN: I deleted some features because of hardware limitations, but the final game turned out to be what I expected for the most part. However I am still not very happy with the name Space Invaders – I originally wanted to name it Space Monster, but the Marketing Manager at Taito told me to change it!

RG: Did you intend the Invaders to get faster the more of them you killed or was that just an accident, with the program running faster when there were less things to update on screen? Was the famous Wall of Death quirk a deliberate design decision?

TN: Originally I wanted to move 55 Invaders at the same time, but the hardware only let me move one Invader every 1/60 second. As a result, Invaders began to move faster as they decreased in number. But in the end, this actually added more thrills to the game. Techniques such as Wall of Death are all bugs. Unlike now, there was no strict debugging process in those days. Actually I think I did the testing myself. If Space Invaders was developed now, it would go through many testers and I'm sure the bugs would be fixed. It was just a matter of luck that there were no freeze bugs!

RG: Which version of Space Invaders is your favourite?

TN: I prefer Space Invaders Part II in the upright cabinet. I know table-style cabinets are more space efficient, but I do like the upright style as it was the popular cabinet style in the early arcade era. Part II also features more variety in gameplay, such as splitting Invaders.

RG: How much of an honour is it to see Space Invaders make a come-back on the PlayStation 2 after all these years?

TN: I feel honoured that the game has been ported many times in the past 25 years and played by different generations of players. Compared to modern games that require skill and complex rules, Space Invaders is a game that almost anyone can immediately pick up and play. The game is a quick fix for those who are tired of modern games.

RG: What is your opinion of the 3D mode and Versus mode included in Space Invaders Anniversary?

TN: I was not planning to include these modes originally, but then I thought the title needed more modern arrangements. The result? Well, I'm not perfectly convinced, to be honest. However, this is the only port that I have personally supervised, so you can expect the classic gameplay of the original to remain intact.

RG: Finally, did you own a pair of those official Taito Space Invaders underpants that are now selling on eBay for thousands of pounds?

TN: No, I did not know about them. I never had a pair.




# Sabre Wulf

## Everyone's favourite 8-bit explorer is back on the GameBoy Advance

Sabreman's latest adventure has been delayed for over two years, but the fact that it's out now is particularly apt, as it's almost exactly two decades since Sabre Wulf first appeared on the Spectrum. In that time, he's starred in three sequels (Underwurlde, Knightlore and Pentagram), and popped up to say hello in Banjo-Tooie on the N64. But was Rare right to coax him out of retirement after all this time?

## The adventure begins

The original Sabre Wulf was a fine, flip-screen maze game, similar in style to Ultimate's earlier Atic Atac but set in a dense jungle. Armed with only a small sword, Sabreman had to defeat zoo loads of animals in his quest to find an ancient amulet. This could then be used to banish the dreaded Sabre Wulf. Besides its grand packaging and unheard of £9.95 price tag, the game is best remembered for being super-colourful and super-difficult. Did anyone ever find all four pieces of the amulet? Perhaps only with a POKE or two.

Underwurlde followed less than six months later, with Sabreman's journey leading him deep into an underground lair. The sequel was more of a standard platformer (Sabreman could now jump), yet the emphasis was firmly on exploration. And explore you did – through 600 separate screens in search of the exit. This time around, contact with enemies did not kill you but bounced you away instead. This often lead to frustration, especially if you were trying to climb to the top of a cavern. Rather than a step on from Sabre Wulf, Underwurlde was more of a shuffle to the side. Knightlore, on the other hand, was a giant leap forward.

There were three exits from Underwurlde, and each one pointed to a different game in the Sabreman saga – Knightlore, Pentagram and Mire Mare. Rather confusingly, Knightlore was released in the same month as Underwurlde, although legend has it (it's legend and not rumour when talking about the history of Ultimate) that the Stamper brothers had Knightlore up and running before Sabre Wulf was even released. Apparently, they thought the 3D graphics in Knightlore were so advanced that they would harm the sales of their own 2D titles. And they probably had a point, because jaws dropped in awe on sight of the game.

Knightlore was the first ever isometric adventure, featuring fantastic 3D graphics and superb character animation. It looked so damn good that competitors fell over themselves to try and mimic its superb style. It was later ported to other 8-bit machines, but on release this was the *one* game to show off the capabilities of the humble Spectrum. The story followed on from Underwurlde and was similarly straightforward. Sabreman had suffered a werewolf's bite, and the only person who could lift the curse was an old wizard who lived in Knightlore castle. You had to search the castle for six special ingredients, which the wizard would combine to rid Sabreman of the curse. The game was certainly more sedate than its prequels, with more thought required than skill, and overall this was the best of all Ultimate's games.

Pentagram appeared in 1986 and served as a long-awaited sequel to both Underwurlde and Knightlore. As with nearly all of Ultimate's later games, Pentagram used an enhanced version of Knightlore's Filmation engine, so it had little impact on release. It certainly wasn't groundbreaking anymore, but the game was a solid enough adventure nonetheless with a number of pleasing puzzle elements. This time around, Sabreman had to explore a haunted forest to find the missing parts of a mysterious Pentagram. To defend himself, our hero could now throw fireballs at unfriendly forest dwellers.

Upon completing Pentagram, Mire Mare was once again mentioned as the next Sabreman adventure. Inside sources suggest that Mire Mare had been completed before the release of Gunfright in 1986, but by this point, Ultimate was on the verge on being bought out by US Gold. For whatever reason, the game was shelved and all that remains now is the myth. But fear not, because Sabreman has returned and the ghost of Mire Mare can finally be laid to rest.

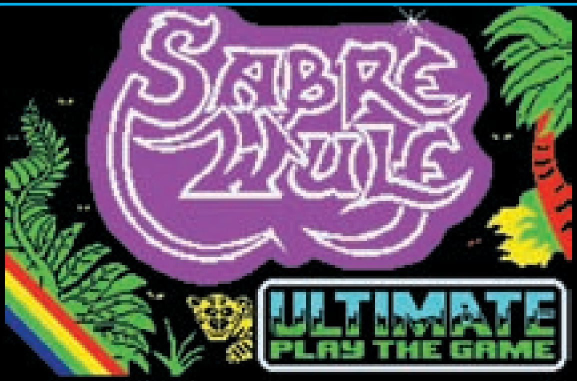
## Older and wiser?

Despite the title, the new Sabre Wulf game is not a remake of the original. The story appropriately picks up 20 years after Sabreman first banished the Wulf. It seems that the local villan, Dr Dolittle-Goode, has smashed the sacred amulet, freeing the Wulf from his prison. The townspeople immediately turn to Sabreman for assistance. To banish the beast once again, he has to track down the eight parts of the amulet and piece them together.

The game cleverly mixes gaming styles. When you're above ground, you can walk around freely, chatting with the locals and carrying out trivial tasks on their behalf. It's basically a mini-RPG. But when you're drawn into the Wulf's lair, the perspective shifts to a more traditional 2D platformer. But don't be fooled by the screenshots, as this is no Donkey Kong Country clone. In order to complete each lair, Sabreman can call upon the local wildlife to help. If a wall is too high to climb, Sabreman can position as snoozing bear next to it and bounce on its belly. If there's an enemy blocking the way, Sabreman can blow it up using a small, detonating dragon. It may sound bizarre, but in many ways it's similar to Lemmings, in that you have to select the correct creature for the job in hand.

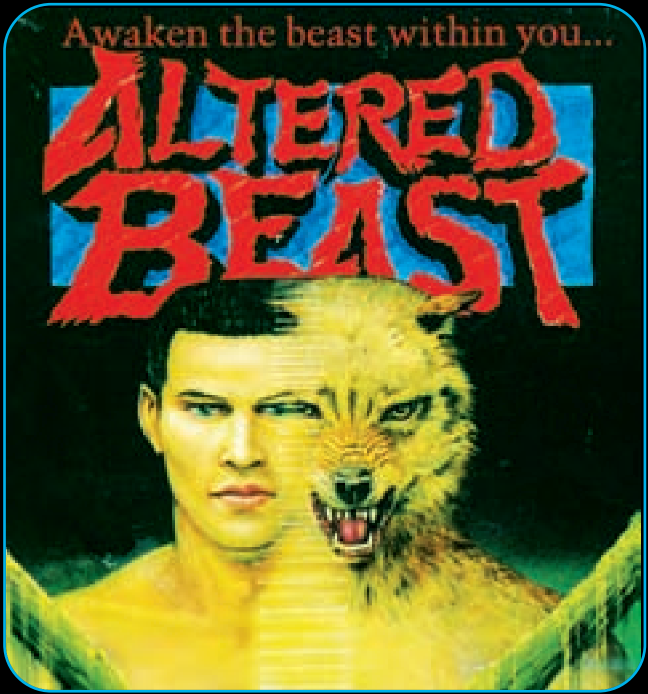
When you reach the Wulf in his lair, and retrieve whatever item he is guarding, the gameplay changes again. You now have to run back to the entrance as quickly as possible, with the Wulf literally snapping at your heels. Similarly frantic scenes ensue when you infiltrate one of the evil Doctor's labs to obtain a piece of the amulet. The idea is to reach the top of the lab by jumping from platform to platform, dodging deadly obstacles and hitting special buttons as you go. To keep you on your toes, acid is slowly filling the lab, much like the rising water in Rainbow Islands.

As you'd expect from Rare, Sabre Wulf is a supremely polished title. The graphics are great, and the various gaming styles sit very well together. Whether it will appeal to fans of the original 8-bit adventures is another matter however. It's a platformer at heart, but the game does not pander to old-skool tastes. This is Sabre Wulf reinvented for the




current generation of gamers. You can save your position at any time, for example, and the game can be completed quite easily in under five hours. And you can put your felt tips away because you certainly won't need to make a map!

In it's defence, the games possesses a great deal of wit and charm, the kind you rarely find in modern games. One joke that runs throughout the game concerns Sabreman's advanced years, a pleasing nod to the amount of time it's taken to get a sequel off the ground. Yes, there's definitely some of that old Ultimate magic at play here. Welcome back Sabreman – we've missed you.

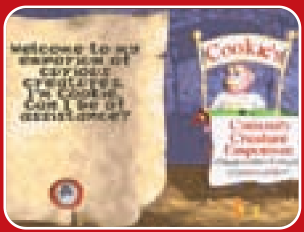



## Reference material

**Sabre Wulf is rife with references to classic Ultimate games. Here's what we've found so far**



The locations are all named after Ultimate titles. Here's the full list, in the order in which you visit them: Blackwyche Village, Karnath Jungle, Underwurlde Mines, Entombed Swamp, Mount Knightlore, Nightshade Mining Corp, Temple of Imhotep, and Dragonskulle Town.



Remember those snazzy lion skin rugs in Atic Atac? Well, the Mayor of Blackwyche has gone one better. He's got the actual coverart to Atic Atic printed on the rug in the village hall. Not particularly inviting...

A statue of the 'devil' from Underwurlde can also be found in the Blackwytch village hall.

The local shopkeeper is named Cookie, after the cake-making game starring Charlie the Chef.

Various snippets of music, like the tune when you begin a new game, are taken from the original Sabre Wulf game.

## Altered Beast

**The monster-morphing beat-em-up is heading for the PlayStation 2, and it's still the best advert for steroids since Pacman...**

Originally released in the arcades in 1988, and later a Megadrive-launch title, this side-scrolling scrapper told of a hero raised from the grave by Zeus to rescue his daughter. It's still doing the rounds on the next generation circuit, with a PS2 release scheduled for February 2005.

Altered Beast sat just above the crowd at the time of its release, due to the incredible ability to transform into several different mythical creatures. Starting out as a mere man, albeit an undead one if the blurb on the packaging is to be believed, players could chomp on 'spirit balls' that would instantly beef them up in size and strength. Collect three balls and you would be changed – together with flashing screen and hideous howling sound – into a beast with more power to your punch and some additional abilities. The type of beast was level-specific, but there were only five levels to the entire game, giving you the selection of werewolf, weredragon, werebear, weretiger, and golden werewolf.

Since its original release, the game has appeared pretty much intact on no less than eight different platforms to date, but the ninth edition on PS2 is a markedly different affair. The new game is being forcibly shoved into the realm of 3D for a start, but infinitely more concerning is the press release that mentions military special operatives, isolated West Coast towns and a deadly but mysterious virus – a world away from Zeus and his necromantic antics.




# Metal Gear

## Most know Solid Snake from the PlayStation classic Metal Gear Solid, but he's been around longer than that!

The original Metal Gear game was released on the MSX in 1987 and the NES in 1988, and was a very different beast to the 3D stealth-fest we have today. Taking the form of a top-down Zelda-esque title, the player took control of Special Forces Fox Hound member Solid Snake as he infiltrated a mercenary stronghold. Your mission was to find out what happened to your comrade-in-arms Grey Fox. His last report contained only two words – Metal Gear. Introducing the stealth element to the gaming world, the original Metal Gear was a true guiding light and a sign of things to come. Using the top-down perspective, you could hide round corners, in shadows and make use of sewer grates in order to remain undetected. The ever-preset codec was used to keep Snake in touch with his commanders and Big Boss was the head honcho behind it all. As would become the norm, Snake also started empty handed and had to find weapons and items during his mission. The MSX version is considered to be the purest form of MG, although due to the rarity of the MSX in the States, it wasn't until the later NES release that the world truly got to see Snake in action.

Thanks to the success of the original title, Hideo Kojima created the second game in the series – Metal Gear 2: Solid Snake. Once again this featured Snake in all his stealthy glory, but this time he was up against the Middle Eastern nation of Zanzibar. This nation had amassed an impressive army and had begun to attack larger nations in order to steal nuclear weapons. Oh, and they also had a new version of the ever-present Metal Gear battle tank. Big Boss was once again up to his old tricks, and the convoluted plot identified Grey Fox as a traitor, but due to the fact that the game only appeared on the MSX2, a large portion of fans were left without the sequel – much to Kojima's despair.



## Rock solid

Hideo Kojima would cheer up eventually though, as would practically every PlayStation-owning gamer in the world. 1998 saw the arrival of the awesome Metal Gear Solid. Plunging the series into 3D, and boasting some of the most impressive visuals ever seen (at least back then), MGS was, and still is, an epic action title lined with an intriguing and gripping narrative, excellent character design and a deep (if a little clumsy) story. All the hallmarks of Metal Gear were present, including the radar, the codec, a heavy script and, of course, stealth. Only this time the stealth had been taken to a whole new level, and there were many more strategies and abilities to be utilised. MGS was also the first in the series to feature a fully voiced script. Impossibly impressive moments were strewn through the game, such as the confrontation with Psycho Mantis who says he can move you controller, and after putting it on the floor, the game uses the vibration to actually move the pad. Fantastic! MGS was loved by pretty much everyone who laid eyes on it. If you didn't like it, there was simply something wrong with you.

MGS was followed by an add-on disc (VR Missions) and a GameBoy Colour offering (Metal Gear Solid in the UK/US, Ghost Babel in Japan) and was eventually granted a sequel on the PS2 in Metal Gear Solid 2: Sons of Liberty. And that brings us to the new Metal Gear title – Metal Gear Solid 3: Snake Eater. Even though there's been plenty of coverage around, there's still a fairly limited amount of actual info available. However, Snake Eater will see the player controlling not Snake, but Big Boss himself (it will be set in the 60s). Judging by the various movies and trailers released, the game is set in the middle of a tropical jungle, and there's a large emphasis in using camouflage to conceal yourself from enemies. After the backlash received about MGS2, we're pretty sure that Hideo Kojima is hoping for big things this time around, but with Sam Fisher doing the rounds in Splinter Cell Pandora Tomorrow, we'll have to see if Solid Snake can reclaim the stealth crown.

## Charlatan Snake

One MG title that has since been dumped by Konami is Metal Gear 2: Snake's Revenge (NES, 1990). This wasn't an actual Kojima title and was developed by a separate Konami team. It still featured Snake and the same game world, but the story and events depicted were nothing to do with the existing series. The game took place between the events seen in MG1 and the true MG2, and featured one of the most ridiculously named villains of all time – Higharolla Kockamamie! This laughable terrorist (presumably pissed at the world for his stupid name) has a stash of nuclear weapons and, surprise, a Metal Gear prototype. Rest easy though, as Snake infiltrated his base, secured the weapons and destroyed the walking tank, bringing the namey wonder to justice.



# Ghosts 'n' Goblins

**Capcom's gallant knight resumes his battle with the undead hoards. Graveyards have never been so much fun**

Capcom has always been a pretty astute player in the publishing game. When Ghosts 'n' Goblins filled arcades in 1985, the subtle blend of fantasy and horror mixed with a quirky sense of humour went down a storm. Lord Arthur, with his shiny suit of armour that would (inevitably) disappear when a stray zombie or demonic fireball caught him off-guard and left him fighting in his briefs, became a legend – more so than his fabled namesake in some circles. There was something unmistakably entertaining about leaping over those graves and flinging lances into the stumbling corpses raised from the earth, even in spite of a mercilessly difficult level that would swallow your 10 pence pieces at an alarming rate.

Capcom released the arcade sequel, Ghouls 'n' Ghosts, in 1988, and it was this version of the knight's tale that appeared on the Master System and Megadrive just a year later. The simple mechanics of the gameplay kept the game alive and kicking through many a platform conversion, including the not terribly different but excitingly named Super Ghouls 'n' Ghosts on the SNES in 1991.

## To the Maximo

Then in 2002, Capcom resurrected Lord Arthur as Maximo on the PlayStation 2. Maximo: Ghosts to Glory was a 3D affair with a different hero, altered storyline and a noticeable splash of spit and polish to the graphics, but still very much a part of the Ghosts 'n' Goblins lineage. Although the change into the third dimension was only to be expected for the PS2, little had changed as far as the gameplay was concerned, and the painfully frustrating difficulty level was back with a vengeance – which was good or bad depending on your view of modern games. You certainly couldn't complete it in an afternoon, that's for sure.

Maximo sold poorly, but that didn't deter Capcom from producing a sequel. Thankfully Maximo Vs The Army of Zin rectified so many of the shortcomings of the previous games, lifting the series right back into the 'well worth a go' range of generic platformers. Even so, the high polygon count, cute and buxom women, quirky monsters and twisting plotline can't detract from the simple pleasures of playing that original, lance-spitting frenzy of a game that graced the arcades nearly 20 years ago. A prime example of how apt the marketing slogan of 'the original and the best' can so often be.

# Doom

**When it comes to first-person shooters, there's only one daddy**



Doom is to PC gaming as the apple falling on Newton's head is to modern physics. Before Doom's release in 1993, the PC was viewed as something to do your accounts on, but after id's prolific masterpiece graced the VGA screen of the boring beige box, things changed, and not just in the PC gaming world either. Doom took the groundwork that Wolfenstien 3D had laid and pushed it far beyond anyone's expectations. We were given a truly enthralling and frightening 3D world packed with the minions of hell. As a battle-hardened space marine, you had to enter an increasingly nightmarish world, doing battle with the likes of imps, demons, cacodemons and the über-powerful barons of hell. To aid you in your crusade against the dark forces you had a range of weapons, including an awesome shotgun, huge chaingun, plasma rifle, rocket launcher and the BFG. The best weapon of the lot though, had to be the chainsaw – groovy!

Despite starting off as a shareware title (which could be upgraded to the full version), Doom grew and grew and grew. Its eventual evolution manifested in the sequel Doom II: Hell on Earth (1994). This took the game from the secret labs of Mars, and delivered the guts and gore to Earth. It packed in more levels, more enemies, better level design and the new super shotgun (which was basically a double-barrel sawn-off). Aside from the new aesthetics, Doom II was essentially the exact same game as the first one, but to be honest, nobody cared. We wanted more Doom, and id delivered it. As well as the two main editions of Doom, the series has spawned a whole truckload of spin offs and mission packs. Ultimate Doom was Doom with an extra chapter bolted on and the original Doom was ported to just about every single format you can think of (even the 3DO and Jaguar were granted versions).

## Future shock

Doom's influence on games is undeniable, even if you're not an FPS fan. Practically every aspect of game design has been influenced by the id cult classic. Level design, weapons and storylines have all been used time and time again, and the changes to the FPS gaming world are obvious for all to see. If there was no Doom, there would be no Quake, Unreal, Halo or Half Life, or the endless streams of other classic we've grown to love. But what's in store for the FPS giant now?

Well, it's almost a certainty that you'll have heard of Doom 3. If not, we can't imagine where you've been. Doom 3 is set to redefine what can be achieved in gaming, and from what we've seen so far, it's closer to a work of art than a videogame. We're told that it will bring the ages old classic back to the forefront of gaming, and will be a genuinely scary title requiring regular underwear changes. Whatever the outcome, there's no denying that Doom 3 is going to be huge, making the Doom line even more legendary.



# Prince of Persia

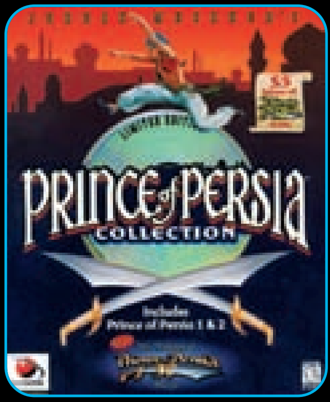
## From the classic original to the amazing Sands of Time, Prince of Persia is proof that great gaming concepts are timeless

Jordan Mechner created a monster. Not in the Frankenstein/Weird Science sense of course, but because his fantastical Arabian Nights-style adventure, which was programmed in his bedroom, is still being updated and reinvented some 15 years later. Mechner used Rotoscope animation, filming his younger brother jumping, rolling, leaping and falling, then used this as a base for his hand-drawn animation of the lead character, revolutionising graphical technique and instigating a whole new gaming genre – the action adventure game.

Originally released on the PC in 1989, the game was set in the booby-trapped castle of the evil Grand Vizier Jaffar, and your quest was to escape the 12 levels of the castle, defeat Jaffar (and his many guards along the way) and rescue the princess – all within an hour. The challenge aside, it was the fluidity of the animation that really set the game apart from anything else at the time. It was revolutionary in many ways and was quickly converted to any computer or console that could handle it.

1993 saw the sequel, subtitled The Shadow and the Flame, receive equally positive praise, though the game was pretty much more of the same with a few new locations and an outdoors 'rooftop ledge' affair thrown in for good measure. But it was the poorly executed and universally disappointing 1999 release of Prince of Persia 3D that very nearly killed the licence, removing all of the fluidity, grace and playability of the previous two games in favour of a stuttered, clearly unfinished and generally lacklustre 3D perspective. Thankfully, Ubi Soft took up the mantle and spent over two years working with original creator Mechner and the acclaimed Montreal Studio (responsible for massive hits like Tom Clancy's Splinter Cell) to bring the series back on top.

The resulting feline acrobatic grace and incredible dynamic




camera angles, combined with an entirely new story woven into play via cinematic cutscenes and continual narrative, once again set the game aside from anything else on the shelves, and helped make Prince of Persia: The Sands of Time one of the most visually stunning and immensely pleasurable gaming experiences to date. This has prompted yet another sequel of equal stature and style, pencilled in for a 2005 release. Though there are many aspects of the original retained in the current offering, the game has been given as much of an overhaul as possible without removing what made the classic first game so damn good. It's a testament to the creative vision and impact of the original to see the care and attention that's gone into updating the game, and with Mr Mechner writing the script, character lines and aiding level design, it seems like its been just the chance he needed to implement ideas that simply weren't technologically possible in 1989, without neglecting the fancy pantaloon-sporting hero that started it all.

# Spy Hunter

## James Bond's bastard love child returns to tune of Peter Gunn




It's no secret anymore, but when Midway originally set out to create the game there was a far more high-profile lead in mind. It doesn't take a genius to figure out that with gadget-filled cars, high-speed chases and secret weapons, the inimitable James Bond was the inspiration for the title. Midway couldn't afford the licence fee for everyone's favourite secret agent, so Spy Hunter became a totally independent release, and actually faired much better for it. It's doubtful that the game could have achieved the cult status it's now afforded whilst under the shadow of such a prominent licence name.

Originally a top-down, fender-bender adventure, players were able to ram other vehicles off the road, fire grill-mounted machine guns and wipe out the mean-spirited opponents with a smoke screen, missile or oil slick. What gave it that extra edge was the ability to leave the road, transforming the car into a boat and taking the battle onto the waves in place of the highway. Just four years after the original release, 1987's Spy Hunter II featured a third-person camera angle for a more 3D feel to the game, as well as simultaneous split-screen action in the arcades. It wasn't until 2002 that a funky remake appeared on the latest batch of console machines, and the flashy-looking but frustrating 'paint by numbers' gameplay of Spy Hunter 2 hit PS2 and Xbox in early March this year, to a lukewarm reception from critics and gamers alike.



# Mortal Kombat

## Midway, proud blood donors since 1992, resurrect their gore-filled fighter

Mortal Kombat will be remembered for many things, but there are three core achievements that force its ugly head well and truly above the crowd. Firstly, it revolutionised the beat-em-up genre with digitised characters and an overwhelming (if not a little comedic) splash of blood and gore. The brutal, lightning-fast combat pricked the hairs on many an ignorant politician's neck, and the series has courted controversy from the very beginning of its arcade life in 1992. Taken with the pinch of salt it ought to be, the violence is stylised and so ridiculously over the top it could only be seen as fictional entertainment, but that doesn't make for a very good campaign or headline news story does it?

Secondly, it lured gamers into that elusive state of 'one more go' fever by offering up an unprecedented amount of secret moves, hidden characters and gameplay quirks. When the first home versions appeared, the games magazine industry practically funded their entire future by printing page after page of move lists, secrets, and fatality combinations to satiate the mass of blood-thirsty gamers worldwide. Nintendo made the shameful error of replacing the gory fatalities with family friendly alternatives, and swapping the blood for sweat. It was a move that saw sales of the SNES version completely outstripped by Sega's Megadrive version, which retained the gore but added a parent-pleasing code to unlock it – smart move Sega.

The game's final, monumental achievement was in convincing an educated, civilised Western world that spelling everything possible with the letter K was a good thing. Kombat, Koins, Krypt, Kaos – it's all so very wrong, and yet fundamental to the commercial branding and unique placement of the series, which we all bought into, thinking it was Kool.

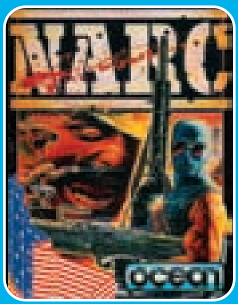
### Finish him!

Successive games in the series were little more than an open invitation for the programmers to let their imaginations run amok, and the gaming community simply lapped it up and begged for more, only tiring of the series when MK3 hit the shelves and loyal fans found the combo system, which by now had become second nature, had been screwed with in a horrible way. The inclusion of 'animalities' also sat uncomfortably with the hardcore MK gamers, and interest in the series began to diminish badly. After a slew of mediocre updates, ill-placed side quests involving central characters, and several bastardisations of the MK3 engine, the series hit the realm of 3D in 1997 with Mortal Kombat 4. Although it's generally agreed that this is the best-looking version of the series, interest had already reached its peak back in the early 90s, and when it turned out that the promotional road show version of the game was barely touched on in the full-price release, the people were angry, and the revised editions that followed were treated to a double uppercut punch into the spiky pit of 'too little, too late'.

In fairness to Midway, even they agreed at this stage that the 'comical' finishers had gone too far, and attempted to backtrack to the more brutal, gory endings that made the game famous in the first place. Six years later, the so-called 'next-gen' consoles were treated to MK: Deadly Alliance. This version was a true 3D fighter and featured beautifully animated characters using a mixture of hand-to-hand and weapons-based combat. Again, the system had been screwed with, and the game utilised a unique three-style fighting technique, with each character being versed in the art of three different martial arts, swapping between them during play to perform stylish combo moves. Sadly, it felt clunky, with characters performing stuttered moves with all the fluidity of a brick, and the ridiculous Krypt with unlockable characters and secrets hidden amidst an entire CD's worth of useless tat, resulted in too many disgruntled fans who were hoping for some redemption in the series. The latest will be Mortal Kombat: Deception, which is due for release in the autumn of 2004. Here's hoping the title is more to do with the complex character storylines that have held the games together, and less to do with Midway's intentions towards fans of the series.

# NARC

## Yes, it's that game where the bad guys exploded when you hit them with a rocket




The year was 1988. The place – arcades across the globe. The attraction was a new coin-op where taking down hard-assed criminals and dirty drug lords was the aim of the game, and dishing out some seriously rough justice was the only way to go about it. That game was NARC, and believers in the ideals of President Nixon, as well as followers of the Crocket and Tubbs school of police work, rejoiced in its splendour.

The game was laced with blood and overly cheesy clichés, but that's kind of what added to its charm, and certainly aided its popularity. The plot revolved around two 'cops on the edge', going by the name of Hitman and Max Force, who embarked on a no-holds-barred onslaught against the evil drugs cartel known as K.R.A.K. None other than Mr Big himself ran the cartel in question, and it seemed he was all set to fill the streets with a new high-potency designer drug called Liquid Soul. Hitman and Max Force were not going to let the poor innocent children fall foul of filth like that, so they set out on a mission to clean up the mean streets. It makes you sweat just thinking about it, and the game certainly had a fast and frantic style to it. Graphically, it summed up the slew of arcade machines at the time, and the (track)suited-up drug dealers and brown coat-clad tramps all looked terribly convincing, if not terribly threatening.

Midway are releasing the game as part of their second Arcade Treasures collection later this year, but there's also a full remake in production for the PlayStation 2, featuring a 3D environment and fighting/crime-busting gameplay style more akin to the recent True Crime: Streets of L.A. than the original arcade classic.




# Out Run

## The sequel to everyone's favourite arcade racer is revved up and ready to go

Do you remember the first time you pushed through the crowd to witness Out Run? Will you ever forget the speed, the soundtrack, the way the road dipped up and down? Back in 1986 Out Run was officially the Best Thing Ever (yes, even better than Police Academy 3), and we're damned if it still doesn't deliver the goods today. If you're lucky enough to visit an arcade that still houses a fully working Deluxe sit-down model, climb in and give this timeless classic a spin. Then again, if you're really lucky, the same arcade just might have a shiny new Out Run 2 machine. Oh man.

Despite the name, Out Run 2 certainly isn't the first sequel to Sega's original. Turbo Outrun appeared in 1989, offering improved visuals, new driving tunes and a super-fast turbo boost button. It was mainly provided as an upgrade kit, so many arcade operators simply updated their older Out Run machines. Turbo Out Run featured a Ferrari F40 instead of the original's Testarossa, while 1992's Out Runners included a selection of different vehicles. Instead of just trying to beat the clock, Out Runners let you compete against human opponents in head-to-head races.

Home versions tailgated the release of the original game, with US Gold converting Out Run to computers and consoles. Turbo Outrun received similar treatment, and a number of spin-offs appeared. The Master System in particular was home to Out Run 3D, Battle Out Run and Out Run Europa (this Chase HQ-inspired entry, in which you raced cars, motorbikes and jet skis, also appeared on 8-bit and 16-bit computers). The futuristic Out Run 2019 later appeared on the Megadrive in 1993.

To say that Out Run 2 is highly anticipated would be an understatement, especially as Sega are launching it as an arcade exclusive. In the 18 years the since the release of the original game, the arcade industry has been in steady decline, and while Out Run 2 won't stop the rot, it certainly gives us hope that there's more to modern arcades than dance machines and 2p flippers. The game itself is surprisingly faithful to the original, although the visuals are cutting edge and there are eight cars to choose from. Everything else is familiar, from the multiple routes through the game to the blonde in the passenger seat. Remixed versions of Musical Sound Shower and the other Out Run tunes even play on the radio!

Whether Out Run 2 appears on home consoles is completely irrelevant. It's in the arcades, and that's where is belongs.

# Shining Force

## Sega's Shining Force series is another classic that many people are totally unaware of




In a time when RPGs were all clones of other titles such as Zelda, Shining Force, ahem, shone out like a beacon and spliced together RPG adventuring and chess-like strategy. Taking the basic premise of good versus evil, light versus dark, the game was always about the classic fantasy struggle. But it didn't all start with such an original style...

Shining in the Darkness (1991) was the first title, and instead of the unique game we would eventually come to know, it embraced the standard first-person dungeon-crawling seen in other titles, such as Dungeon Master and Eye of the Beholder. As the heroic knight, along with your trusty friends, you had to rescue a princess (yawn) from the evil Dark Sol (a name that would become synonymous with the series). Still, despite the seen-it-all-before approach, it was a great game that didn't take itself too seriously. It was certainly good enough to warrant a sequel.

It's the second title that many will remember most fondly. Shining Force (1992) brought with it the deliciously addictive and life-stealing tactical/RPG fusion that would make the series great. Once again, as a young heroic warrior you had to battle against the forces of Dark Sol, only this time you did so on vast battlefields with an army of men behind you. As the game progressed, and you ventured around the towns and cities, you could recruit a wide number of skilled soldiers and warriors into your cause. Each soldier had its own ability (some were strong, magical or could even fly), and each gave you different tactical options in battle. The chess-like tactical battles were superb, and each one was challenging, though never too difficult. There was always some ingenious tactic you could create that would turn the tide – you just had to think about it.

The first game was a masterpiece, and the formula was so good that Sega didn't really have to change anything for the inevitable sequels. From then on, multiple titles were released, far too many to go into in-depth here – Shining Force II and III, Shining Wisdom, and Shining Soul I and II are just a few of them.

However, the Saturn saw a sequel that took the series back to its roots. Shining the Holy Ark was a true homage to Shining in the Darkness. Doing away with the top-down exploration and strategic battles, it instead gave us turn-based first-person dungeon exploration. Although it never really made it into the mainstream, and wasn't really what the hardcore fan base wanted, it was a good game nonetheless.

Soon, however, the series will be revived on the GBA with Shining Force: Resurrection of the Dark Dragon. This promises to bring the classic Shinning Force action to the masses once again, and it certainly looks as though it's going to be another classic instalment of one of the greatest RPG lines of all time.

# Shinobi

**If you're a fan of knife-throwing ninjas, you should welcome Shinobi into your gaming collection**




The original Shinobi (aka Joe Musashi) bore very little resemblance to the man he would become in later incarnations, and looked more like a boy in a school PE kit than a ninja, but he still managed to kick some ass nonetheless. In his fight against an evil syndicate of ninja assassins, Shinobi had to rescue the children of the Iga ninja clan. This boiled down to a side-scrolling shooter of sorts. By attacking enemies using throwing stars and martial arts, you had to rescue the hostages in each level, and do battle with the inevitable end-of-level boss. So successful was the title that it was made available on pretty much every format of the time.

The next appearance of Sega's ninja was on the Megadrive in The Revenge of Shinobi (1991) . Even after the various sequels, many still believe this early incarnation to be the best of the lot and it delivered greatly improved gameplay, the Megadrive's graphical glitz and generally flawless content. You fought such enemies as giant samurai, endless armies of ninja warriors, the Terminator and even Spider-man in your quest of violence, and every second was superb.

Around the same time, The Cyber Shinobi appeared on the Master System, but it was the next arcade instalment that caught people's attention. Shadow Dancer was the loosely associated Shinobi follow-up that cast you as a white ninja who had a white wolf following him around. Gameplay was almost identical to Shinobi, but people didn't want the new boy, they wanted more Joe...

Shinobi III: Return of the Ninja Master was released on the Megadrive in 1993 and it pushed the game forward yet again. Adding new abilities, including the ability to run, jump off walls, ride horses and even surf, Shinobi III once again delivered the goods, and was one of the finest games to grace the Megadrive.

Other versions of both Shinobi and Shadow Dancer have appeared on console and handheld, but our favourite console ninja has eventually become a new beefed-up Shinobi on the PS2. The new version features a leather-clad, red-scarf wearing Shinobi in a title that has a very strong resemblance to Devil May Cry. It looks great, plays well enough, but some think that it's just too samey. Perhaps the upcoming female version of Shinobi – Nightshade – will bring the licence back to form. This promises even more 3D Shinobi action, only with a generous helping of girl power.




# The Last Ninja

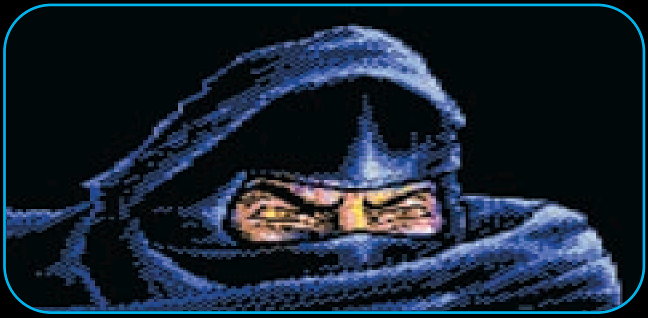
**He may be the last, but his gaming legacy lives one**

Ask most gamers around these days about The Last Ninja, and they'll most likely reply "What?!". But for the more hardened veterans out there, these are holy words. System 3's Last Ninja series is a true oddity in the retro world, because despite being a true classic, the sequels were a bit on the crap side. Let's start at the beginning.

The first Last Ninja title arrived on the C64, Amstrad, Atari ST and Amiga in 1987. In it you played as the Ninja Armakuni and had to wander through rural environments fighting numerous enemies, acquiring new weapons and solving puzzles. For the time, the graphics and animation were stunning and the soundtrack was superb. The game was notoriously hard though, and many players just gave up due to sheer frustration (remember that stepping stone bit?).

As good as the original title was, things were set to change in the sequel. Last Ninja 2 followed in 1988 and retained the same solid gameplay, but the setting was shifted, rather bizarrely, to modern-day New York. While this was a bit on the odd side, it really dropped the ball when you found out you had to make your nunchaku out of two toilet flush chains – yeah, OK! The setting just didn't work, and the game, although it sold very well, is the weakest of the series. An enhanced version, entitled Last Ninja Remix, added some new puzzles and improved things slightly. Last Ninja 3 arrived in 1991 and wisely returned to the correct historical period. The classic Last Ninja gameplay was retained, but everything had a new layer of polish.

Despite staying hidden from sight for several years now, the Last Ninja is due to return to our screens in a full 3D revival, aiming to take on upstarts such as Shinobi and Ninja Gaiden. Only a few screens have been released so far however, some of which are largely out of date. Whether this means that the game has been changed or that the developer is simply keeping quiet for now, we can't say. But, we have very fond memories of the original trilogy and look forward to the new instalment.





# Castlevania

## The battle between Count Dracula and the Belmont clan rages on

Before the Metal Gear Solids and the Pro Evos we know today, Konami was a force to be reckoned with in the side-scrolling platform world, and Castlevania was the jewel in its run-and-jump crown. The first game arrived in 1987 and introduced us to Simon Belmont, the whip-wielding vampire hunter charged with the task of laying the dreaded Dracula to rest. Making the most of the technology available at the time, Castlevania delivered an immensely stiff challenge with excellent graphics and some superb audio backing the proceedings. Simon was a rather clunky and stiff character though, and despite having a whip as his main weapon, his attacks were less than flexible. But overcoming the limitations, a new legend was born – a legend that would be around for a long time to come.

A year later, the gaming public got the second outing of the series, but there was trouble in Transylvania. Instead of the expected sequel, which was to deliver more of the same winning original formula, Castlevania II: Simon's Quest, was an RPG adventure-style affair. After defeating Dracula, Simon inadvertently released a plague on the land which, in their own poorly animated way, the inhabitants weren't too happy about. So, in order to put things right and get into the hero books again, our fearless vampire killer had to find the parts of Dracula's body so he could burn them in the re-deceased blood sucker's castle. Aside from the adventure and RPG elements, the game introduced an interesting time element to the game that saw enemies becoming stronger at night and dropping more items on defeat, while they were easier to defeat in the light of day. Despite being a great game, many die-hard fans simply didn't want to give the second coming the time of day, but it wasn't long before the fanboys were silenced...

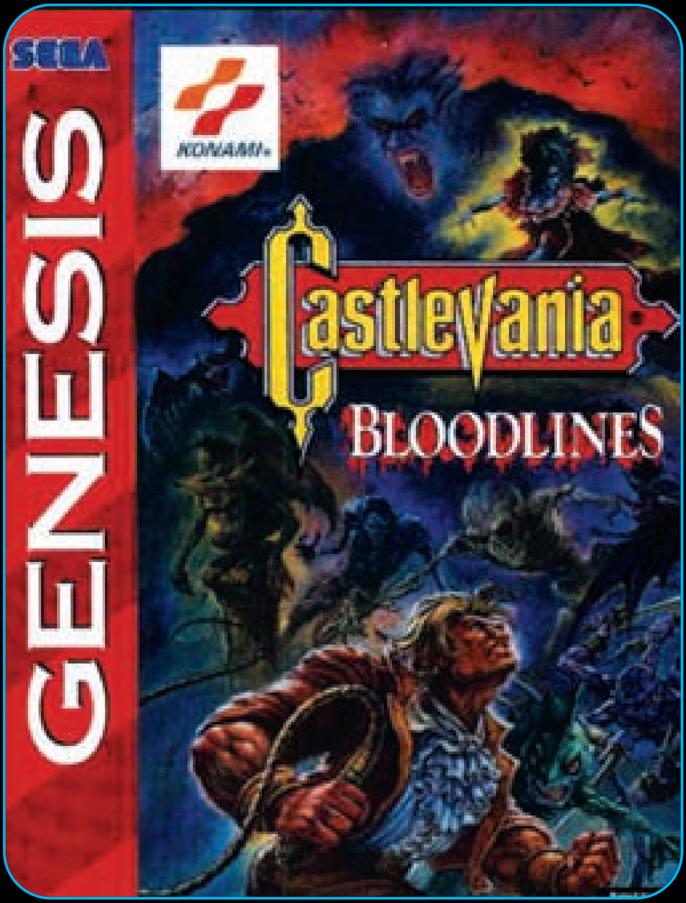
Castlevania III: Dracula's Curse (1990) is considered by some to be the best of the series. The game took place 100 years before the original and depicted the events seen by Trevor (!) Belmont, Simon's ancestor. This was where the magical whip was acquired (from the Poltergeist King), and it introduced three new characters – Grant DaNasty, Sypha Belnades and Alucard, who was Dracula's son (and would also get his own game later). Dracula's Curse retained the controversial adventure-RPG mould of the second title, but this time it had a much more action-orientated approach. You could also exercise your own will by choosing your way through the game as there were several pathways. As you progressed, you were accompanied by a partner character, who would have their own strengths and weaknesses. Choosing the right person for the job was a good tactical addition.

## Simon goes forth

The arrival of the SNES heralded the next instalment of the series, and Super Castlevania IV was the result. Harnessing the increased power of the SNES, Konami pulled out all the stops to bring the franchise to the 16-bit console. Graphically the game had come on in leaps and bounds. Simon (once again the star of the show) looked mighty fine, and the levels demonstrated Konami's obvious talent for getting the most out of the SNES (let's face it, the Konami lot were the SNES masters). The new Mode 7 technology was implemented to deliver such scenes as the amazing rotating room. The game ditched the multiple paths and adventure elements in favour of the original title's pure arcade roots, and the character control was improved (such as the ability to control your direction in mid-air). And yes, the sole aim of the game was to kill Dracula yet again – he's persistent, we'll give him that.

In 1995 Castlevania: Vampire's Kiss appeared on the SNES. Ditching the numeral in the title, and changing Simon for Richter, this was a double-edged sword of a game. The original PC Engine version of the game was raved about by fans, but the transition to the SNES was a travesty. It suffered from clumsy controls, poor design and lacked some of the features from the PC Engine version. Needless to say, most self-respecting 'vania fans were understandably peeved.

However, any misgivings were blown sky high with the release of Symphony of the Night (1997) on the PlayStation and Saturn. To this day, the majority of fans consider this instalment to be the best of the bunch. Visually, although still in 2D, the game looked superb and the animation was excellent. Sonically there was a massive diversity in styles, ranging from atmospheric gothic backings to heavy guitar-fused aggro rock. More importantly however, players finally got the chance to play as Alucard, who was an instantly more appealing character than Simon. There was also a ton of replay value due to hidden areas and four different endings.



1999 witnessed the release of Castlevania 64 for the Nintendo 64, and it was quite simply awful. The two characters – vampire-hunter Reinhardt Schneider and magic-user Carrie Fernandez – were just plain boring, and the locations ranged from average to piss poor. Controlling your character was a pain in the backside and attacking enemies was a chore. Dracula had also seemingly possessed the camera, as this was by far your worst enemy. Despite trying to re-introduce cool features such as the night and day cycles and possessing 3D graphics, most people chose to forget this title ever saw the vamp-killing light of day. The N64 sequel, subtitled Legacy of Darkness, was a marginal improvement.

## Take my hand

This brings us to the near past, and the recent handheld versions of Castlevania. Castlevania: Circle of the Moon (2001), Harmony of Dissonance (2002) and Aria of Sorrow (2003) all made it onto the GBA. Circle of the Moon introduced the main character of Nathan Graves, a vampire hunter looking for his mentor and co-learner (a vamp killer in training, folks). The classic Castlevania format was adopted along with a card-collecting power-up system that could be used to gain more abilities. Harmony of Dissonance featured another Belmont family heir by the name of Juste, who also carried a whip and sported a funky long coat. It did away with the card system in favour of a weapon-upgrading spell system, and the end result was portable version of Symphony of the Night (sort of). The last GBA title, Aria of Sorrow, plunged the series into the future. Set in 2035, you controlled Soma, who had the ability to absorb enemies' souls in order to gain greater powers. The story of the game attempted to take Castlevania in other directions, but it didn't quite work.

So, we arrive at the current day, with the release of Castlevania: Lament of Innocence on the ever-popular PS2. Acting as a prequel to the earlier games, you play Leon Belmont, once again battling the ever-present forces of evil and bloodlust. You have to fight through more gothic locations with your trusty whip and a collection of magical weapons. With impressive visuals, RPG elements, free roaming gameplay and the usual Konami flair, it looks as if the series has come of age. But we do still hanker for the days of Symphony...

## Extra morsels

Several other titles related to the Castlevania series also appeared on the market. Besides the three B&W GameBoy titles, there was Vampire Killer (1986) on the MSX. While not an actual Castlevania title, it bore all the classic hallmarks of the franchise, right down to the whip and holy water. Graphically it was superior to the NES original, but gameplay-wise, it was as hard as nails and suffered from goofy controls.

Back on the official side of things was Castlevania: Bloodlines (1994) on the Sega Megadrive. The simple fact that it was a Castlevania game on a Sega system was odd, but the title itself was actually rather good. As either John Morris or Eric Lecarde, you had to travel all over Europe in order to stop the evil Countess Bartley from resurrecting Count Dracula. Graphically the game didn't have the same oomph as the SNES counterparts, but it played well nonetheless.

We couldn't finish without mentioning Castlevania Chronicles on the original PlayStation. This was not a new game, but a port of a rare Castlevania game that appeared on the Sharp X68000 game console in 1993. The game was very similar to the NES original, only with SNES-style graphics. Definitely one for the Castlevania collector.

# Contra

## Konami's long-running Contra series is still as destructive as ever



Here we have another Konami title, this time in the form of a full-on side-scrolling blaster. Contra started life in the arcade, and the original game saw the Contra force doing battle with Red Falcon – an alien intent on taking over the world (that old chestnut). The story, however, was irrelevant really, and all that mattered was the display of intense, hard-as--nails action.

The series ploughed on as only Konami's cash cows can. Versions appeared on the MSX2, NES, SNES, Megadrive, and GameBoy. Perhaps the pinnacle of classic Contra though was the SNES version – Contra III: The Alien Wars (released in 1992 and called Super Probotector in some regions). This used the power of the SNES to the full, and contained some hair-raising action sequences. Indeed, it's this stringing together of high-brow bosses and chase scenes that make the series what it is. The Megadrive version (Contra: Hard Corps, 1994) was a little odd though, not only changing its name depending on the region, but also the characters. In Japan for example, the characters were normal soldiers, but in the UK version, Hard Corps were robotic fighters (well, armour clad anyway). The Megadrive version was also insanely difficult and put many people off. As well as the 8-bit and 16-bit versions, Contra also appeared on the PSone (Contra: Legacy of War and C: The Contra Adventure) and on the GBA (Contra Advance: The Alien Wars EX).

Contra is still ploughing on though, with Contra: Shattered Soldier appearing on the PS2 last year. That game retained the 2D side-scrolling style, but the recently announced Neo Contra will be in full 3D. The preview shots sure look pretty, but whether it can rekindle the classic Contra gameplay will remain to be seen.






# Ninja Gaiden

## Tecmo's favourite pet assassin slices and dices his way onto the Xbox

Starting life as a remake of Japanese title Ninja Ryukenden, the arcade version is, for some obscure reason, completely different to any of the successive home releases. As it happens, that's a good thing, because the two-player Double Dragon-style beat-em-up wasn't all that popular at the time, in spite of a variety of moves/combos including the ability to swing from carefully placed poles and kick opponents in the teeth.

The NES version appeared in 1989, just one year after the arcade original, yet gameplay and style were vastly different – and all the better for it as it turned out. Where the arcade machine had no plot to speak of, the NES version broke the trend of the time and outlined a story through (admittedly basic) cinematic scenes spliced in between gameplay. Games just wouldn't be the same these days without their intro, plot and ending cinematics, but back then it was a whole new concept, and one that naturally impressed the gaming public. But another trend was set with that first NES version that has peaked and troughed sporadically throughout the series, and that's the difficulty level. Ninja Gaiden on the NES threw up an immense challenge even for the veteran gamer, and almost dared you to complete it mentally and physically intact. It switched sides for Ninja Gaiden 2, with a paltry two- to three-hour completion time, often without using a single continue, and then shot right back up to ludicrous for the second sequel.

The game has seen several changes on its journey through the various console and portable gaming platforms, mainly with improvements to graphics and the addition of certain generic attack moves. The current version on Xbox is both a return to the roots of the series and a giant leap forward at the same time. Graphically the game has never looked more beautiful, with real-time shadows and slick animation, but the gameplay harks back to the original NES version with cinematic plot sections, a complex story and a difficulty level that will have you tearing your hair out midway through the tutorial. As a bonus for the masochists amongst you, the Xbox version includes all three previous NES/SNES versions as secret unlockable bonus items for the ultimate nostalgia trip. Tough as nails, playable as hell – Ninja Gaiden lives on.

# Metal Slug

## SNK's run-and-gun shooter leaves a trail of destruction in its wake




In stark contradiction to any connotations implied by the mollusc-based title, Metal Slug is not something that would give Alan Titchmarsh nightmares. Not unless he's got a secret fear of explosive, high-octane shoot-em-ups with hand-drawn sprites, that is. The unashamedly old-skool blaster refuses to evolve into just another polygon-filled clone, and remains one of the best examples of traditional arcade fun as a result.

First appearing in 1996, the game was a massive hit on the NeoGeo as well as in arcades, and has since spawned numerous updates and re-workings on everything from the Sega Saturn to the GBA, popping onto Sony's machines in the process. The games are all short, frantic and intensely playable little gems that are splashed with vibrant colour and huge explosions, as well as being laced with quirky animation and a wicked sense of humour. The care and attention that goes into the hand-drawn sprites adds a personal touch that provides an intangible but undeniable charm, which might otherwise have been lacking in a game of this type.

If you've somehow missed out on the various incarnations over the years, a quick trip to eBay would be well worth your time. Alternatively, you could hang on for the Xbox version, which is currently in production to boost Microsoft's uninspiring console performance in Japan, and promises again to remain faithful to the charm, style and determinedly old-skool gameplay style of the series.






# Pitfall

## For Pitfall Harry, a call to the jungle is never far away

Activision's Pitfall series has had something of a chequered history. David Crane's original, which first appeared on the Atari 2600, was a classic, with 256 screens of rope-swinging, barrel-rolling, croc-baiting, treasure-hunting action. The sequel, subtitled Lost Caverns, followed in 1983, and saw Harry exploring an underground labyrinth in search of his niece Rhoda, her cat Quickclaw, and the rare Raj Diamond. The sequel was much bigger, with many more screens to explore. Both games were ported to just about every viable platform of the time, and Sega even created an arcade version of Pitfall 2.

Things started to go downhill with Super Pitfall on the NES. This 1986 release redesigned Harry to look just like Mario, and both the plot and theme music were lifted straight from Pitfall 2. There were new caverns to explore, and Harry now brandished a gun, but it was a poor effort that sorely lacked David Crane's input. Much better was 1994's Pitfall: The Mayan Adventure. Appearing on the Megadrive, SNES, Jaguar and PC (a GameBoy Advance version has since appeared), you played Pitfall Harry's wily young son, and the aim was to rescue Harry Senior from the clutches of an evil Mayan spirit. It was a fun, run-and-jump platformer with 13 levels set in jungles, ruins and mines. A very similar adventure unfolded in Pitfall: Beyond The Jungle (1998) on the PSone and GameBoy Colour. Once again you played Harry's son, this time swinging into action to save the Moku tribe. The PSone version stands out as Harry was voiced by Bruce Campbell (Ash in The Evil Dead movies).

Fast forward to 2004 and Pitfall: The Lost Expedition is available on PlayStation 2, GameCube and Xbox. Unsurprisingly, the action is now viewed in 3D, complete with brilliant, cartoony graphics, and the overall result is very good. All of the old obstacles are there, including gaping holes, barrels and crocodiles, plus there are a bunch of new puzzle challenges to keep you interested. Like in all 3D games, platform jumping is tricky because it's difficult to judge where you'll land, and all the usual adventure game clichés are present (what's this – a secret passage *behind a waterfall?*), but overall The Lost Expedition is a quality update of the classic original. And as an added bonus, emulated versions of Pitfall and Pitfall II are included as hidden secrets.

# Metroid

## The continuing adventures of Samus Arran, one of Nintendo's finest creations

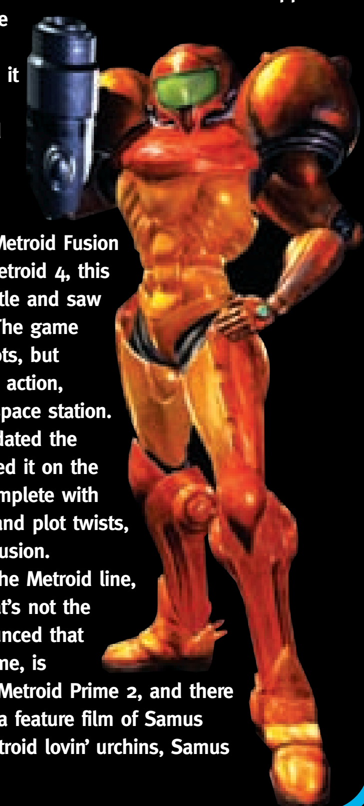
Nintendo launched the series on the NES in 1988, and started laying the groundwork for future titles. As Samus, you had to battle the evil space pirates and, of course, Mother Brain, the leader of the whole operation (not bad for a brain in a jar, eh?). Introducing RPG elements such as upgradeable weapons, increased health and a huge free-to-roam world to explore, Metroid was a hit, and rightly so.

Metroid II: the Return of Samus was released on the GameBoy in 1991, and detailed Samus' adventure to the planet SR388, the birthplace of the Metroids. On arrival she discovered that the Metroids were more than just jellyfish-like creatures, and she did battle with a whole range of Metroid forms. Despite the black and white visuals of the GameBoy, the game still had all of the classic Metroid gameplay, and introduced a new save system.

Perhaps the pinnacle of Metroid, however, came with the SNES and Super Metroid (1994), a game so good it came in a massive box complete with its own player's guide. Returning to the Planet Zebes (from the first Metroid) and referencing many of the original's areas and events, Super Metroid effortlessly blended elements of episodes one and two into a massive title that demanded your attention. Better graphics, sound, new areas and many old throwbacks combined to form an all-time classic, and a solid reason to go out and buy a second-hand SNES to play it one more time.

## Prime cut

After the first three titles, many thought that Metroid was done and dusted. Oh no, Nintendo were merely giving Samus a rest, and with the arrival of the GameCube, she was back in Metroid Prime (2002). Only this time, she was in first-person form. Even though it wasn't a side-scroller, Prime still played like a classic Metroid title. Fans lapped it up, and the introduction of huge 3D worlds, new abilities and cameos from old characters made it an instant hit. Prime, however, didn't really follow the series, and was a bit of an oddity where the story was concerned.



For the true sequel to Super Metroid, gamers had to wait for Metroid Fusion (2002) on the GBA. Also called Metroid 4, this title followed on from the SNES title and saw Samus fused with Metroid DNA. The game went back to its side-scrolling roots, but instead of the usual planet-based action, Fusion took place inside a large space station. In addition, Nintendo has just updated the original Metroid game and released it on the GBA as Metroid: Zero Mission, complete with new enemies, weapons, puzzles and plot twists, and featuring the graphics from Fusion.

And so, we reach the end of the Metroid line, or do we? Nope dear readers, that's not the case. Nintendo has already announced that Retro, the Texan team behind Prime, is already hard at work developing Metroid Prime 2, and there are even some sketchy plans for a feature film of Samus Arran's exploits. So, relax you Metroid lovin' urchins, Samus will be back.

# Spy Vs Spy

## The black and white spies are still laying traps for each other after all this time

These two pointy-nosed secret agents are about as cult as you can get, and the transition from the MAD magazine to First Star gaming classic was a stroke of genius, and a true indication of how popular multiplayer gaming would eventually become. As a true split-screen two-player experience, the game used the two patented features of Simulvision and Simulplay. These features let two people play the game at the same time, instead of taking turns. While this is old news now, way back when (1984 to be exact), this was astounding. Each player had to lay traps for the other using the Trapulator (including such classics as placing a bucket of acid over a door or hiding a gun inside a draw), and had to collect various quest items before their opponent

The first game took place in a high rise, and saw the spies finding objects in the various rooms to cram into their top-secret suitcases. Eventually a second title emerged – Spy Vs Spy: The Island Caper, which moved the proceeding to a desert island and offered better graphics and even more trap-laying action, but kept the same split-screen layout and two-player mode. The final game in the original trilogy was Spy Vs Spy: Arctic Antics, and it saw the two adversaries in a space race, each attempting to launch skywards in a rocket before the other. This time though, the proceedings were set in the freezing cold of the Arctic, and the traps reflected this. You could get up to such scheming trickery as cutting holes in the ice, causing your hapless foe to fall to their freezing doom. The games, while very similar, all had the same winning formula of two-player simultaneous action, and if you consider when they were made, they were well ahead of their time.

The good news is that an all-new updated and 3D version of the black and white spies' antics is being produced, and from the screens we've seen so far, things are looking very promising indeed, recreating the original two-player mayhem with modern-day flair. So, if you missed them the first time around, or you're too young to remember them, now's your chance.



# Leisure Suit Larry

## The gaming world's equivalent of Peter Stringfellow returns for more fun and games



Our hapless hero never concerned himself with the likes of saving the world or combating forces of evil. Oh no. Instead, he did battle with an altogether more terrifying foe – women! The Larry series of games, released through the 80s and 90s, all featured one central goal above everything else – to sleep with the fairer sex. It was your goal to help Harry score, in various locales and with a number of increasingly more attractive women as the technology evolved.

The first game in the series was titled Larry in the Land of the Lounge Lizards and was released on the PC in 1987. This was actually based upon the older classic, Softporn – an Applesoft text adventure. However, the writer of the game, Al Lowe, changed the focus of the title to poke fun at the main character, Larry. With leisure suit ready, hair-do buffed and a quirky personality, the first Larry game won critical accolades, although it didn't sell particularly well.

So, with the winning formula in hand, it wasn't long before a series of adventures were created, each one advancing in both content and graphics. Larry slowly became the sex mad cartoon character we know today, but he never lost his suit or hair. Other titles included Love for Sail, Looking for Love (In Several Wrong Places) and, of course, Passionate Patti in Pursuit of the Pulsating Pectorals! In this episode, the series took a turn and there was actually a real bona fide woman *after* Larry!

In 1991, the original Larry game (Lounge Lizards) was re-released with improved visuals and sound. Oddly enough, the series also missed out a fourth incarnation and went from episode three to five. This was simply because Al Lowe promised that there wouldn't be a fourth game after he made the third.

Well, it's the present day, and Larry is soon to be up to his old tricks in the upcoming Leisure Suit Larry: Magna Cum Laude. This time however, Sierra is following the trend of sex comedies such as American Pie and There's Something About Mary, and is taking Larry back to his collage days, showing him as a student at the local community collage. Spending most of his time in his dorm room, Larry isn't the outgoing chap we know from past adventures, but that will soon change as he vows to change his life, and plans to enter a dating game show so he can find 'true love'.






# R-Type

## The battle against the mighty Bydo empire builds to a thrilling climax

Konami is the king of the side-scrolling shooter, with titles such as Scramble, Nemesis and Salamander, but Irem has always contested the throne with its R-Type series. The original game, released back in 1987, was a classy space-based shooter, with amazingly detailed graphics, frantic gameplay and some of the most spectacular bosses ever designed. Best of all though was the 'force' power-up system. This searing ball of destructive energy could be attached to either the front or rear of your R-9 ship, doubling as both a weapon and a shield. Furthermore, by holding down the fire button you could build up and discharge an unstoppable laser blast.

R-Type II predictably followed in 1989 and proved to be much tougher (and it wasn't as if the original was exactly easy). To cope with the increased difficulty, the sequel introduced an enhanced R-9 ship with a more powerful laser blast, but even so it was still a hardcore challenge. After the colourful original, R-Type II looked bland in comparison, with a drab colour palette used throughout. Still, this worthy sequel proved equally popular in the arcades.

Surprisingly, there was only one more arcade sequel, and that was limited to a Japanese release. R-Type Leo arrived in 1992 and controversially dropped the force power-up in favour of two 'bit' devices. In its defence, it looked superb, and for the only time ever in an R-Type game, two players could play simultaneously. That's right – if an end-of-level boss was just too taxing, a friend could jump in fight alongside you.

### Home comforts

R-Type was ported to many home platforms, ranging from an excellent conversion on the humble Spectrum to an arcade-perfect port on PC Engine. The SNES was treated to Super R-Type, a bastardisation of stages from R-Type and R-Type II that suffered from chronic slowdown in places. No such problems were present in R-Type III, a SNES-only sequel that appeared in 1994. This true sequel, which had nothing in common with R-Type Leo, introduced three different types of force, all of which behaved differently. The game has since been released on the GameBoy Advance, although this port is slightly let down by a dodgy rendition of the original in-game music.

In 1998, PlayStation owners were treated to R-Types, a collection featuring R-Type and R-Type II. The noticeable absence of R-Type Leo and R-Type III was softened somewhat with the inclusion of an R-Type Delta demo. Delta followed in 1999 and cleverly mixed the traditional 2D gameplay with impressive 3D backgrounds. For the first time there were different ships to choose from. There was the standard R-9, the enhanced R-13, the powerful R-X, and the secret POWarmour, a Bydo ship that was unlocked after completing the game. Each ship had its own unique force device, a series of three power-ups, and a special 'Delta' attack. This effectively allowed you to play through the game with four distinct ships.

### The final chapter

If Delta impressed with its four ships, then the new R-Type Final on the PlayStation 2 will astonish shoot-em-up fans, as it features 101 individual craft! You start with the familiar R-9, but more and more ships can be unlocked as you blast your way through the game. You can even pilot a range of Bydo ships, fighting fire with fire so to speak.

The game plays very much like a polished version of R-Type Delta. The 3D environments return and are used to head-spinning effect. You'll often find yourself flying upside down at 45 degrees to the ground! The ship sprites are simply fantastic, easily the best ever seen in such a title. The game retains R-Type Delta's variable speed settings – you can speed up or slow down using the shoulder buttons – and there are five difficulty levels, ranging from Baby to R-Typer. Add all this to the various pathways through the game, plus the presence of a new Vs mode, and R-Type Final emerges as best of breed.

It's kind of sad that this is the last game in the series (apparently), but then again, R-Type Final takes the side-scrolling shooter about as far as it can go and bows out on an explosive high. Better it burns out than fades away in a series of increasingly similar sequels.





# >The Clone Wars...

**From the double cassette deck through to the CD writer, piracy is a problem that has always plagued the software industry. Law abiding citizen Anthony Buckley looks back at some of the methods used to try and stop its spread**

In the eyes of the law, piracy is theft, with perpetrators facing fines and even jail, but this has rarely deterred the average man on the street. After all, it's not as if you've driven out of the forecourt without paying for your petrol, is it? And games have always been too expensive anyway, haven't they? Whatever your personal thoughts on software piracy, the fact remains that a good many of us have copied software in the past. It's illegal and immoral, but the temptation to get something for nothing can be difficult to resist.

In a bid to combat piracy and deliver us from evil, publishers have spent years trying to safeguard their software, only for end-users to spend minutes circumventing their copy protection methods. Take Jet Set Willy from Software Projects, for example. Prior to its release in 1984, you could copy virtually any 8-bit tape-based game using a hi-fi with twin tape decks. Pop the original in one deck, a blank C15 tape from Boots, WHSmiths or wherever in the other, and away you go. Five minutes later, you'd have a perfect copy. But Jet Set Willy tried to change all this with its code card. Once the game had loaded, the user was prompted to enter a random colour code from the card. Obviously, anyone who had purchased the game legitimately could tap in the code and the game would run. Those who had made a copy were restricted to playing a guessing game, and with a 1 in 256 chance of getting the code right (with the game resetting after two failed attempts), there was little hope of that.

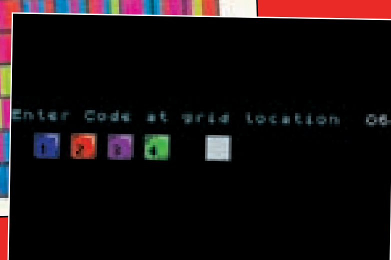
Copying the code card was the only answer, but the card was in colour and photocopiers of the time were limited to black and white. The solution was to grab some coloured pens and copy the card by hand. This would take around an hour, so while it no doubt deterred some people, it hardly heralded the end of piracy as we know it.



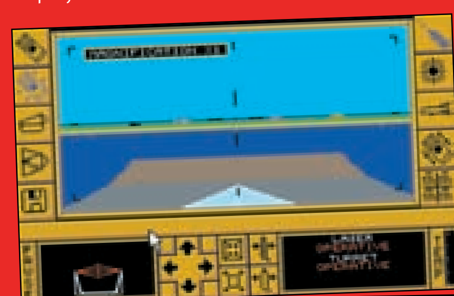
## Manual protection

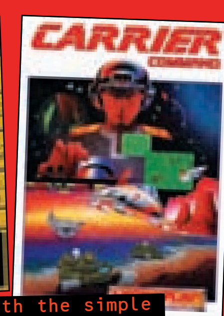
Despite its shortcomings, this technique of impeding the pirate after the deed had been done was popular throughout the 1980s. As games become more complicated, many were bundled with user manuals which provided publishers with a convenient way of protecting their software. Upon loading, games like Microplay's Carrier Command and Microprose's Formula One Grand Prix asked the player to look in the manual and enter a certain word from a certain paragraph, from a certain page. The timing of this prompt differed from title to title, with some games popping the question after loading whereas others waited until after play had begun. Protecting the game with the manual served as a successful deterrent against the amateur pirate, as in most cases the manual was large, making photocopying it an arduous and time-consuming task. However, it did mean that legitimate players had to flick through the manual every time they wished to play their game. And, of course, manuals were liable to become lost, rendering the game unplayable.






The original Jet Set Willy featured a simple code sheet protection scheme

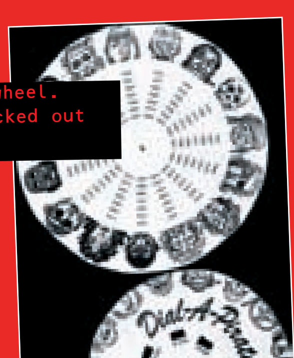




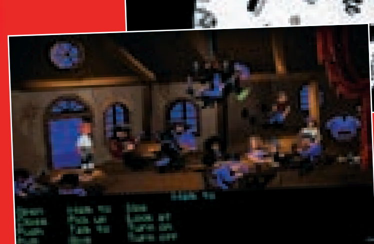

Carrier Command was protected with the simple 'manual look-up' method

To make the copy protection schemes less intrusive, publishers attempted to tie-in their methods with the overall theme of the game. A popular choice for this was the code wheel, used to good effect in LucasArts' Monkey Island games. The original release of the first game (it was later dropped from the re-released versions) came bundled with a 'Dial-A-Pirate' code wheel. The game would display the face of a dead pirate and ask you in which year he was hung. This information was discovered by turning the supplied code wheel. Similarly, Monkey Island 2 revealed a voodoo potion and you had to use the code wheel to discover the quantity of the ingredients required. Cinemaware's Rocket Ranger also used a code wheel, although in this example the codes were required to operate your character's Rocket Pack. On the whole, spinning a code wheel was preferable to thumbing through a manual, but the wheels were far easier to duplicate. You simply had to photocopy it in all of its positions.

To combat the growing use of the photocopier as a pirate's friend, some developers decided to protect their protection. In the original DOS release of Sim City, the player was presented with three symbols and asked to enter the name and population of the corresponding city. The

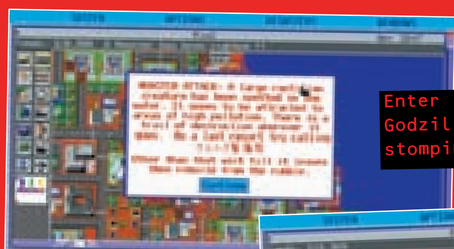



The Monkey Island code wheel. Lose it and you were locked out of the game forever!



relevant information was listed on a code sheet which was printed on shiny red paper, making it impossible to photocopy. It was difficult to read off the paper, particularly under artificial light which tended to reflect off it. Worms on the Amiga utilised a similar method, with black gloss text printed on black matt paper.

Sim City also introduced the idea of feature-limited play. If you happened to enter the wrong city, the game did not reset as expected. Instead, you could carry on playing, but the game would rock your simulated city with all manner of disasters (earthquakes, typhoons and Godzilla). This made it completely unplayable, reducing it to little more than a demo for the full game. EA's Starflight followed suit with a similar, smile-raising ploy. In order to leave the space port, you had to enter a code from the wheel. Get it wrong and you were still permitted to leave, but police ships would give chase and pull you over for software piracy!

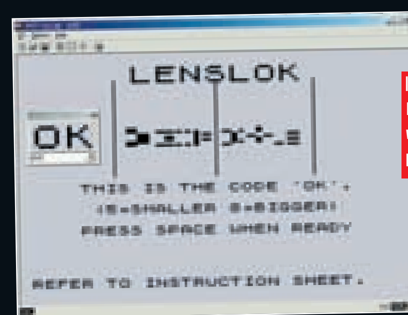




Enter an incorrect code and Godzilla would soon be stomping on your Sims

## Lok and Key

If you play Spectrum games through an emulator, Lenslok may come back and haunt you from time to time. Many of the games protected with the scheme have since had it removed, but there are some files (the perfect .tzx tape images found at **www.worldofspectrum.org**, for example) that retain the security check for authenticity's sake. But don't worry if you don't have the required Lenslok to hand, as you can use LensKey to uncover the code. This small, freeware utility lets you highlight the scrambled text as it's displayed in your emulator. LensKey can be downloaded from **http://homepage.ntlworld.com/simon.owen/lenskey** and full instructions are included on the site.




It really works! The LensKey makes easy work of the Lenslok protection scheme

## Plastic tat

The problem with any code sheet or wheel was that it could be copied, either by hand or using a photocopier. What was needed was something tangible that couldn't possibly be duplicated. The result was Lenslok – a ridged plastic lens for the Spectrum designed to decipher a scrambled code on the screen. It sounded simple enough, but in experience was only possible if you had 20:20 vision and a degree of telepathy. The process was lengthy and split into three separate stages. Firstly, the Lenslok had to be calibrated so that it would work with your TV. To do this, the user was required to alter the size of the onscreen H to match the size of the lens. Then there was a practice run allowing the player to get to grips with the Lenslok by deciphering the onscreen jumble so that the letters O and K could be seen. Once this was complete, the player had to decipher the proper code to access the game. You then had three attempts to get it right before the game reset, and to make matters worse, you were up against the clock!

Prior to its release, it was hoped that Lenslok would be adopted by many publishers. It was small, cheap to produce and almost failsafe because the lens was unique to the game it was protecting, meaning gamers could not buy one game and use it to access them all. But only Telecomsoft and a handful of others signed up. The Spectrum version of Elite was the first game to be protected in this way, and it emerged that an incorrect version of the device had been bundled with hundreds of copies, making them completely unplayable! Despite these teething problems, Lenslok was notoriously difficult to use at the best of times, and the fact that the game reset itself after three failed attempts only added to the frustration. There were also compatibility issues as the device would not work with certain sizes of TV.

Compatibility problems also befell the infamous dongle used by Ocean to protect the Amiga version of Robocop 3. This small piece of






Life through a Lenslok. Perhaps it sounded like a good idea at the time

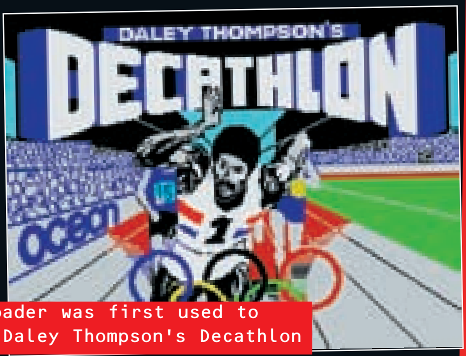
hardware had to be connected to one of the Amiga's joystick ports and the game would then request electronic verification that the dongle was present for the game to run. Unfortunately, the dongle could not be attached to the newer A600 model. But this was the least of Ocean's problems, as the dongle was defeated by hackers and a cracked version appeared before the game was officially released. And how, exactly, had the pirates managed to piss on Ocean's parade? They'd simply disassembled the code, identified all the calls to the dongle and bypassed them.

## No win situation

The examples touched upon can only be described as deterrents: they merely impeded the so-called 'playground pirates', the type of people who would not have the time or patience to photocopy a manual or duplicate a code wheel. But the Robocop 3 debacle proved that, no matter how ambitious the copy protection methods were, a skilled hacker would always find a way to circumnavigate them. The situation has not changed since, despite the increasingly sophisticated copy protection schemes applied to the latest CD and DVD software. Which begs the question – if piracy is simply unavoidable, why do publishers waste time and money protecting their products? Especially as it's the legitimate buyer who ultimately suffers (see Lenslok). If this realisation had been reached prior to the release of games like Jet Set Willy, the hackers would have nothing to crack and the man on the street would have been spared the suffering. RG*

## >The Need for Speedlock

In a bid to stop people copying tape-based games in the first place, David Looker and David Aubrey-Jones (who converted Mercenary to the Spectrum and Amstrad) developed a protection scheme called Speedlock. It worked by adding a sequence of short tones and clicks of varying frequencies to the program's leader. The subtle differences in frequency served to fool standard tape recorders, resulting in a faulty copy. It sounded like the perfect solution, although Spectrum magazines were inundated with letters from angry gamers who claimed that even original Speedlock-protected games rarely loaded correctly. On the plus side, the scheme facilitated faster loading times and even introduced some clever loading effects (the onscreen timer that appeared on later Spectrum games was down to an updated version of Speedlock). Despite the reliability concerns, similar schemes (often known as fastloaders or hyperloaders) appeared on most 8-bit platforms.




The Speedlock loader was first used to protect Ocean's Daley Thompson's Decathlon

## >A Northen Soul

### Rob Northen lifts the lid on his 'Copylock' system, the king of anti-piracy techniques

Around 1984, after leaving the South Bank University of London, I worked for Acornsoft, the software arm of Acorn Computers. During my short stay there I wrote a protection system for them. This was to replace their existing disk protection written by Jez San of Argonaut. Jez had used illegal 6502 opcodes, which were not going to be supported by the newer 65C02 to be used in the BBC machines. One of the earlier titles using my protection was Elite. This used a primitive yet effective form of self-modifying code at the start of the program to hide the clever bits written by Braben and Bell. I remember them being very protective of their code in Elite, particularly the maths routines.

I set up Copylock Software soon after leaving Acornsoft. It's difficult to give an exact time scale, because the protection system 'evolved'. I used ideas and techniques drawn from earlier experiences at Acornsoft. The method worked by adding a Copylock track to the disk that a drive could read without error, but was unable to write. This normally involved changing the bitcell size of outputted bytes written to the track. The Amiga drives, and for that matter ST and PC too, are quite tolerant of reading data at varying bitcells, within reason. Fortunately, these drives will always write data at a constant bitcell.

I first used this technique reliably on the ST around 1987. One of the tracks on the floppy, probably track 0, had one of the sectors written using a reduced bitcell. Using a carefully written piece of code I was able to detect this special sector by comparing the times to read in both types of sector. From memory, I think the 'slow' sector had to take at least 15% longer to read than the other sectors or it failed the protection test. I used a similar technique, and variations of it, for the Amiga.

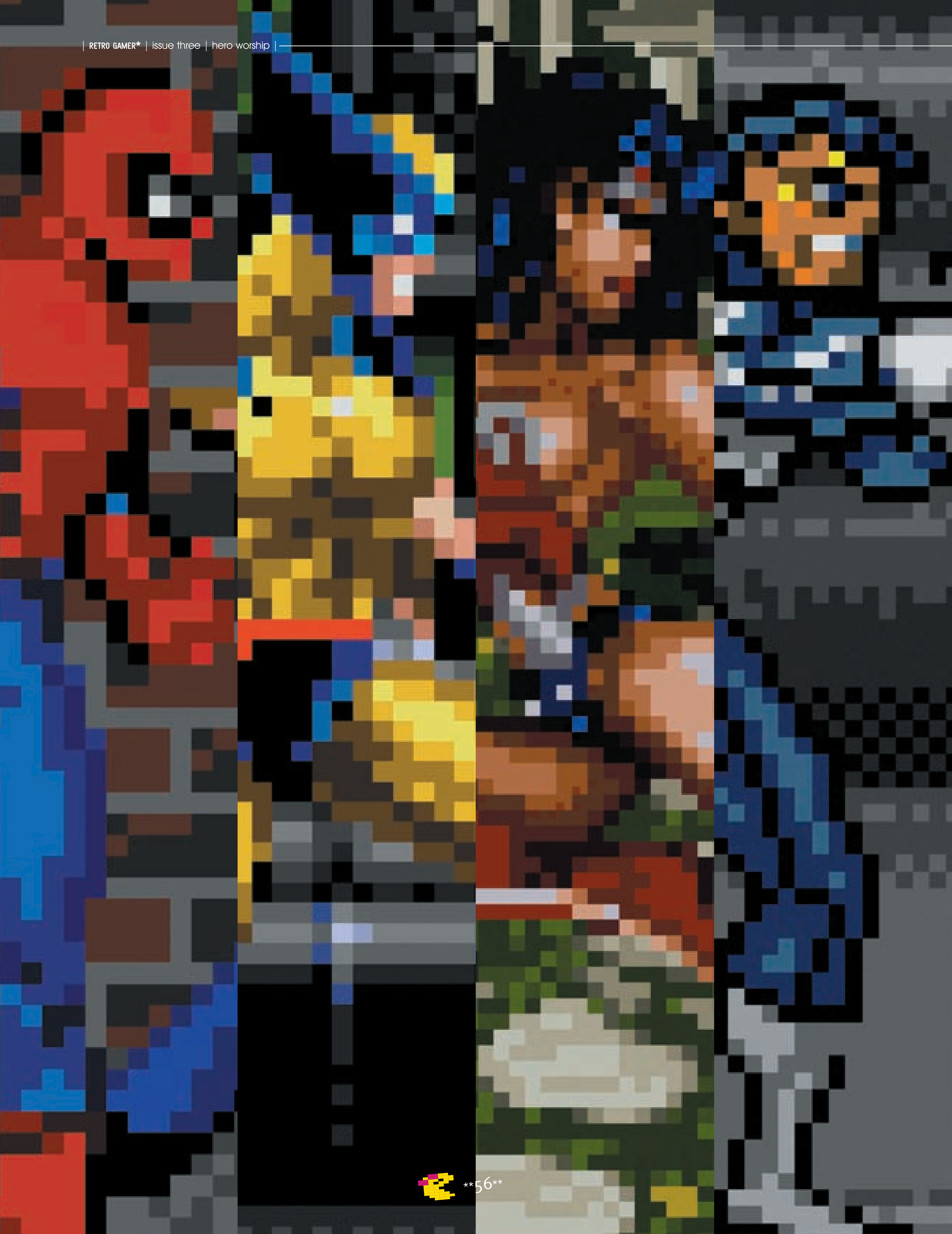
Between 1988 and 1996, around 500 commercial Amiga games were protected with the Copylock system. The majority were done between 1989 and 1992. I worked for dozens of companies on and off, but I was never involved in the actual production of the game itself. The publisher/developer would either send me the final unprotected master or I would send out keydisks for the programmer to implement the protection. When I produced the final protected master myself I would have to replace the game's loader with my own encrypted loader. This would go through various anti-hacking routines, check for the protected disk format and finally run the original game loader. The problems with this method were that I'd have to find enough free space on the master disk for the protected track and the new loader. Also, the protection would only be called once at the start of the game.

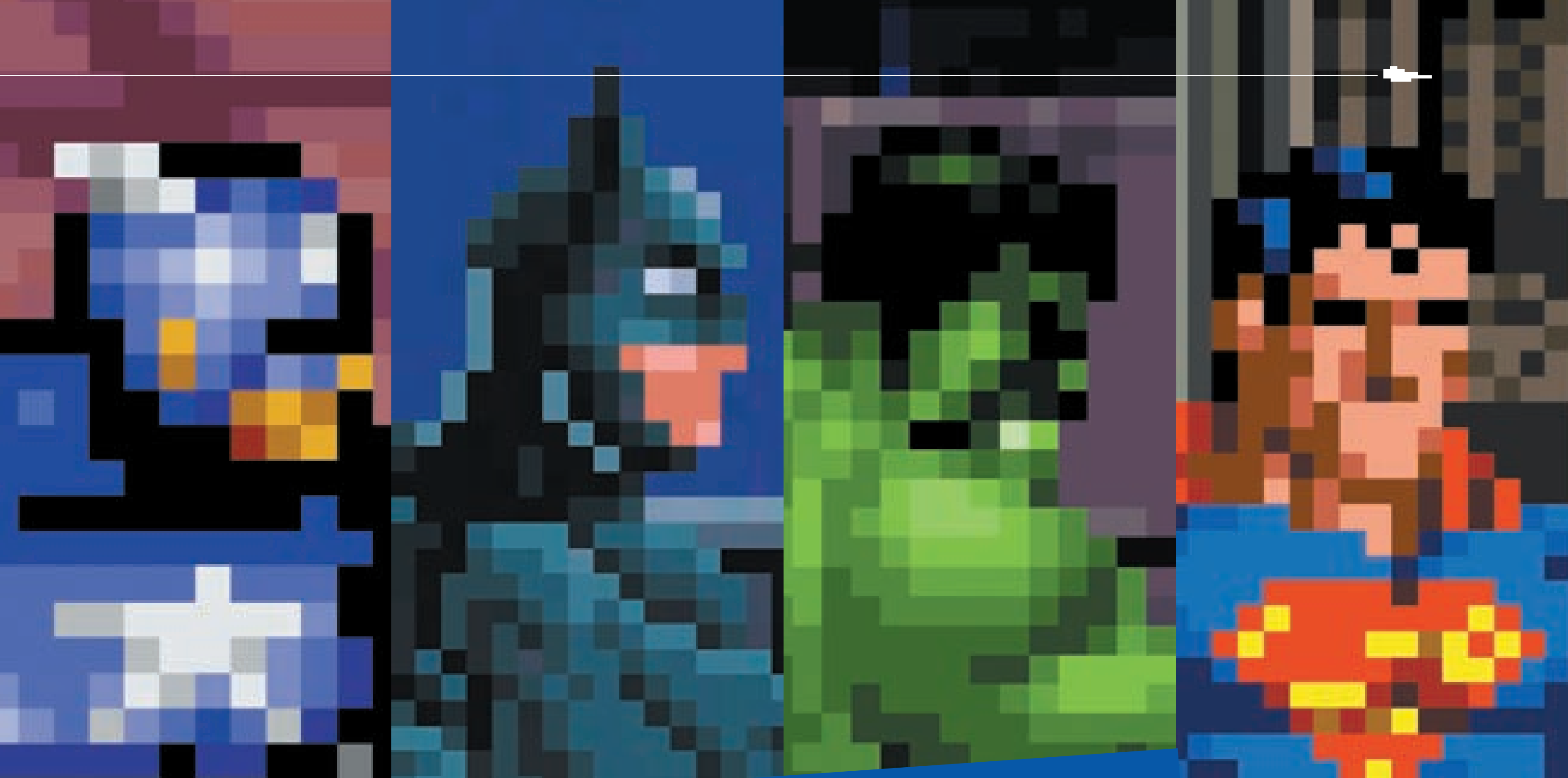
When I sent out the Copylock routines and keydisks to the programmers, they were able to implement far better protection because the checks were embedded in the game and would be called at various stages of game play. Each programmer would receive a different set of keydisks that would have a unique serial number. When my code was called it would either return 0 if the protection failed or the 32-bit serial number of the keydisk. Later, I would make the checks subtler by returning the serial number to an address passed as a parameter in one of the data registers. All these operations were performed within my anti-hacking code to make the hacker's job far harder.

To test how effective my protection was, I buried my telephone number in the heart of the encryption – I think it was for R-Type on the ST. I did receive one call from a German hacker several weeks after the game was released, very early one morning. I don't remember receiving any others. In my opinion, the protection had passed the test!

Thanks to Codetapper

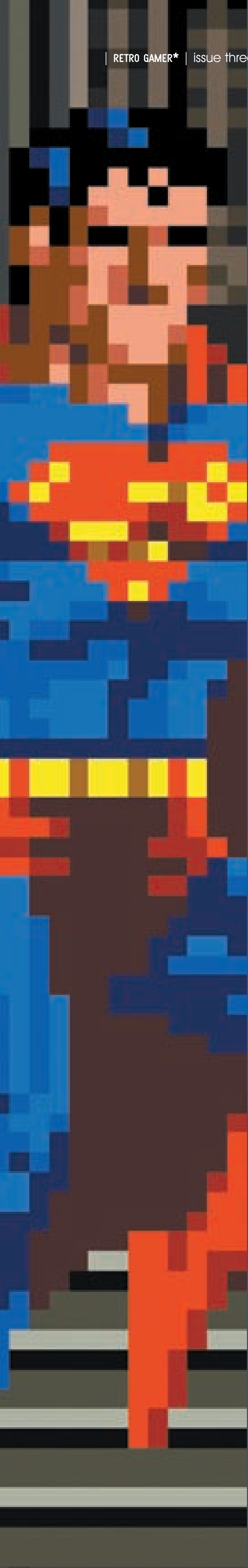
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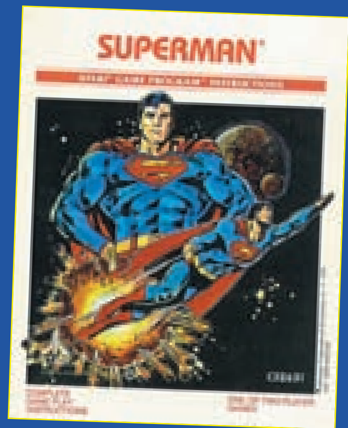


# >Hero Worship

The appeal of gaming is built on a solid bedrock of adolescent power fantasies and outlandish abilities, so it's only natural that games and comic book superheroes would share a long and varied history together. It hasn't always been an easy relationship – comic fans are notoriously hard to please, and the games industry has a fondness for mishandling licensed properties, and yet some truly great gaming moments have involved lycra jumpsuits, flapping capes and cackling super-villains. For everyone who dreamed of leaping tall buildings in a single bound, or openly wished for a radioactive spider bite, Dan Whitehead casts a critical eye over some of our favourite heroes' interactive outings



# >Superman




As well as being arguably the world's best-known superhero, Clark Kent's Kryptonian alter-ego can also lay claim to being the first popular superhero to make the transition to computer game fame. In 1979 he flew onto the Atari 2600 console in a race against time to rebuild the Metropolis bridge, capture the criminals and get back to the Daily Planet before anyone noticed Clark Kent had vanished. Hardly groundbreaking stuff, but for a licensed game on such a restrictive platform, it did a good job.

1985 brought the next dose of Kryptonite to the gaming world, in the shape of a perplexing maze game for the Spectrum, Amstrad and C64 in which Superman had to fly around a basic labyrinth, dodging splodgy baddies and moving mirrors to bounce his sluggish heat vision around the level. With graphics not much better than the Atari 2600 game, and gameplay that owed more to a bad Pac-Man clone than any superhero comic, this game is probably best remembered for setting the precedent of crappy Superman games. Another C64 effort, Superman: Man of Steel, fared better, but only because it was a blatant rip-off of Space Harrier.

Things went understandably quiet on the Superman front until 1988, when he hit both the arcade and the home in two radically different titles. Taito's coin-op was a two-player vertical and horizontal scrolling beat-em-up which, while finally giving us a recognisable superhero to play as, was fatally undermined by a rather tedious array of moves – punch, kick or blast. The NES Superman game was much more interesting – a cute and colourful platformer with very Japanese 'big head' characters. It's not just the anime looks that make this game worth noting though, it's also one of the few games where you could duck into phone boxes and cupboards to switch between Clark Kent and Superman at will, and also offered an impressive array of superpowers including heat rays, super-breath, spin attacks and X-ray vision. It also handily brings up one of the many problems that Superman writers have long wrestled with ‹208› how do you create peril for a supposedly invincible character? Well, the Nintendo answer was simply to make him vulnerable to being shot or punched which seems a bit like cheating but, like most NES titles, the silliness masks a damn solid game.

The Sega Master System was his next port of call, in 1992, for a pedestrian side-scroller which is useful only as an example of the flaws repeated in too many superhero games – generic bad guys and poor use of superpowers. Superman can't even fly in this game, he just sort of glides for a short distance after each jump; a depressingly mundane game that typified the lazy approach to comic adaptations.

The arrival of the Megadrive and SNES finally gave home gamers the graphical power to do the world of comic action justice, but sadly it also coincided with an increasing laziness among games companies. Licensed games were seen as quick cash cows, and often only the graphics would change between titles. That was certainly the case with Sunsoft's 1994 effort, The Death and Return of Superman, itself based on DC Comics' rather cynical attempt to boost flagging sales by 'killing' Superman. A plodding side-scroller, it played like a slowed down version of Double Dragon and relied far too heavily on repetitive attacks and overuse of the same three enemy sprites to truly impress. The only innovation in the game's favour was the gimmick of playing as Superman for the first two levels until he meets a 'shocking' demise at the hands of Doomsday. You then had to play the game through five times in the guise of the various Super-themed heroes who pop up to fill the Supe's void. Complete the game with all the different heroes, and you found out if Superman really was dead. Not much of a mystery, considering the game's title.

We wouldn't see Superman grace a console again until 1997, when he made an ill-advised stop on the Nintendo 64 for what is widely regarded as one of the worst games ever made, and his two recent outings for Xbox and PlayStation 2 weren't much better, so we'll just have to hope that Electronic Arts has something more impressive in mind now it's swiped the rights to the character from Atari.



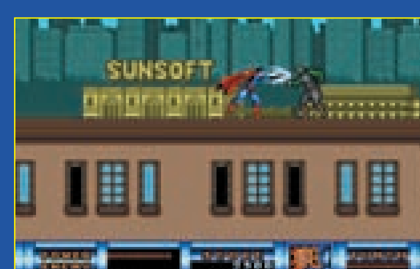
Superman – Coin-op


Superman – Atari 2600


Superman – Commodore 64



Superman – NES



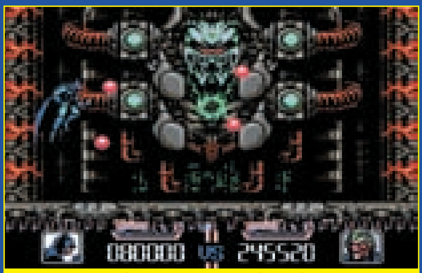
Superman – Megadrive

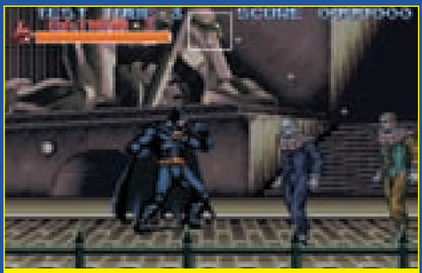

Superman – SNES


Batman The Movie – Coin-op


Batman – Spectrum


Batman – Commodore 64


Batman – The Return of Joker – NES


Batman Returns – SNES


Adventures of Batman & Robin – SNES

# >Batman

Bruce Wayne was rather late in joining the video games party, but it was worth the wait. His first interactive outing came from the UK and the talented hands of Jon Ritman. Published by Ocean for the Spectrum and other 8-bit platforms in 1985, the game took the isometric 3D viewpoint pioneered in Ultimate's groundbreaking Knight Lore, and applied them to an exploration and puzzle-based adventure with Batman on a quest to track down the missing parts of the Batmobile. Reimagining the Batcave as a series of interlinked rooms stocked with weird monsters and platforms may have been a stretch, but other little touches were carried across intact – especially the slide down the Batpole at the start of the game. With a chunkily recognisable Batman sprite (thanks to Bernie Drummond), and an electronic rendition of the TV theme, Ritman's take on Batman got the character off to a good gaming start, and it's still great fun to this day.

Ocean kept the Batman flag flying with another solid – and very different ‹208› 8-bit entry in 1988. Subtitled 'The Caped Crusader', this game took its stylistic cue from the comics, and also brought in The Joker and Penguin to supply the villainy. A flip-screen adventure, with an emphasis on finding useful objects and pummelling henchmen, it looked classy for the ol' Spectrum as each new room opened up in a comic-style panel overlaid on top of the previous one. The Caped Crusader also offered double the gaming for your money. One side of the tape contained 'A Bird In The Hand', in which you tried to foil the Penguin's nefarious scheme, while flipping the tape brought you 'A Fete Worse Than Death' with The Joker as your foe. With gameplay that remembered Batman's main asset isn't his fists but his detective brain, this is still a damn sight better than most modern superhero games. Huge things lay around the corner for the Dark Knight, and they wouldn't bode well for innovative game design...

1989 was undoubtedly the Year of the Bat. Tim Burton's movie was plastered across every billboard and cinema screen in the world, and with this sudden rush of interest the character was yanked from the cosy world of British bedroom coders and into a much harsher industry spotlight. Hastily constructed platform fighters sprung up on every console and computer known to mankind, often bearing little resemblance to the character or film beyond the familiar golden-hued movie logo and droning renditions of Danny Elfman's theme music. The coin-op version stayed closest to the movie in terms of looks and storyline, though the stiff gameplay betrayed its rush to coincide with the big screen release. Other versions of note included the Amiga version, which added some fun Batmobile driving elements, and the NES version, which had nothing to do with the movie, but was still a fun – if basic – platform game.

The next few years would see a glut of Bat-product hit the shelves, loosely connected to whatever Bat movie was approaching or hitting cinemas at the time. The Batman Returns titles were often fairly obvious redesigns of games based on the original movie, with a few cosmetic polishes, while 1995's Batman Forever spawned a truly terrible fighting coin-op game using digitised characters from the movie.

The one bright beacon amongst all the generic movie spin-offs came in the shape of a 1994 Konami release for the Megadrive and SNES. Taking its cue from the superb Paul Dini animated series, The Adventures of Batman and Robin took the now-traditional side-scrolling platform fighting game and injected it with no small amount of inspiration and dedication to the source material. Helped along by some of the finest animation to grace the 16-bit console market, the game really captured the look, feel and tone of the award-winning cartoon, and married it to a game that actually – gasp! – had a story. Several stories in fact. Broken up into mini-episodes of a few levels each, beautifully paced, and pitting Batman against a rogue's gallery of villains, the game included a frantic race through a booby-trapped funhouse, a supremely tense fight with The Joker on a rollercoaster, and a glossily slick control set-up that allowed you to pick and choose your arsenal at the Batcave and then use grapple hooks, gas bombs and batarangs at your discretion in the thick of the action. Easily the best Batman game since the days of 8-bit enthusiasm, it remains a highlight of the 16-bit era.

Sadly, things went downhill from there. The execrable Batman & Robin movie brought us an ambitious 3D adventure for the PlayStation, which tried to bring back the detective elements but was scuppered by horrible viewpoints and glitchy graphics. Ubisoft returned to the Animated Series for a well-meaning but clumsy stealth adventure, Kemco tried to recall the 70s' grit of the comics in the otherwise predictable Dark Tomorrow, while Rise of Sin Tzu promised a game that matched the creative renaissance in the comics (artist Jim Lee provided new character designs) but the stodgy beat-em-up gameplay made it all for nowt. With the new movie, Batman Begins, sounding promising – a back-to-basics plot with gritty action and a serious look at the early years of the crimefighter – let's pray that we get a decent game to go with it.



# >Spider-Man




Good ol' Spidey is an interesting case study in the realm of superhero games. With no blockbuster movie franchise to piggyback on, Spider-Man games were forced to turn to the original source, the comic books, for their inspiration. With that in mind, it's impressive just how many times Peter Parker has graced our keyboards and joypads.

Spidey hit the gaming scene hard in the 90s, as guys like Todd McFarlane turned his slumping titles into million-selling phenomena. Prior to that, there had been the Questprobe text adventure game and a couple of basic games for the early consoles and home computers. The Atari 2600 offered up a 1982 effort in which you crawled up the front of a skyscraper to defuse the Green Goblin's 'superbomb'. Even though Spidey was made up of about 20 pink and blue pixels, it was a fun first outing. The C64 showcased Dr Doom's Revenge in 1989 (an awkward beat-em-up in which he teamed up with Captain America) and The Amazing Spider-Man in 1990, which at least attempted to recreate his webslinging antics.

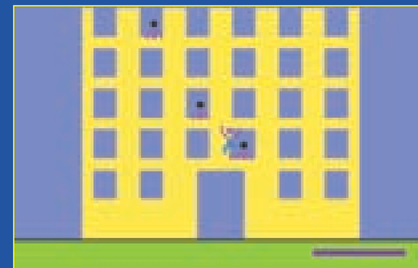
Spidey was always going to be a console hero through and through, and he got things rolling with games like Return of the Sinister Six and Spider-Man vs The Kingpin on the NES and Master System. Like most superhero games, they were scrolling fighting games, but kudos must be given for at least basic attempts to make use of Spidey's unique powers.

It was during the early 1990s, the era of SNES and Megadrive, that Spidey really started to dominate, as each major storyline from his red-hot comics seemed to get spun-off into a video game. Titles like Maximum Carnage and Spider-Man & Venom: Separation Anxiety predictably relied on the bad boys of the Spidey universe – the murderous symbiote monsters Venom and Carnage for their impact, but while the characters may have been hot stuff, their games were trudgingly obvious left-to-right clobberfests.

He teamed up with the X-Men for Arcade's Revenge, but unfortunately the game opened with one of the worst first levels of any game, ever. Battling against sluggish controls, you had to guide Spidey through an uneventful maze to hit flashing beacons as they lit up. Get killed by one of the robot laser cannons and you had to start the whole tiresome task from scratch. The X-Men probably did something exciting later on, but few gamers could be bothered to find out. Lethal Foes of Spider-Man on the SNES is probably the pick of the bunch from this period, if only because the graphics were faithful to the comics, and it managed to find an (almost) happy medium between offering all of Spidey's abilities, workable controls and decent pacing. It also deserves credit for promising 'lethal foes' and then confronting you with Z-list menace The Beetle at the end of level one. Only a stupidly harsh time limit prevents this from being more fondly remembered.

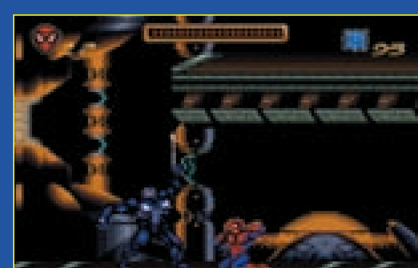
In direct contrast to Batman and Superman, Spidey's best gaming days were yet to come, and Activision's 2000 Spider-Man game redefined what we expect from a superhero title, finally allowing gamers to swing across a 3D cityscape, climb on any surface, and encounter a plethora of Marvel characters in cameo roles. Having Stan Lee as the narrator was the cherry on the cake for fans, and it proved to be a solid bedrock for the similar game of the blockbuster movie in 2002. The upcoming game based on the movie sequel looks set to be even better, with a more free-roaming approach and the chance to tackle street crimes as they happen. For Spidey, at least, the future is bright.

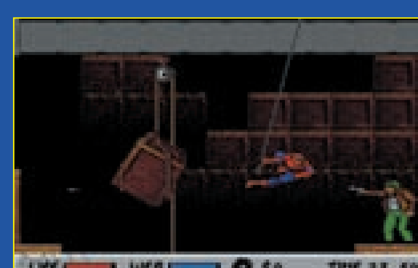


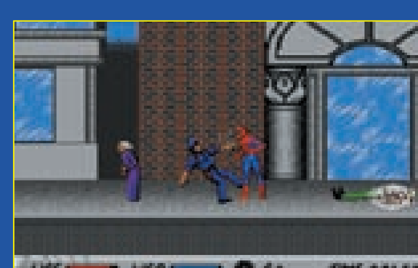


Spider-Man – Atari 2600


The Amazing Spider-Man – C64


Spiderman Vs Sinister 6 – NES


The Animated Series – SNES


Spider-Man – Megadrive


Spider-Man Vs Kingpin – Megadrive

# >Team Tactics

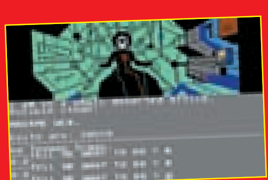



One of the great traditions of the comic world is the team-up, where heroes and characters from different comic books join forces, either permanently (as with The Avengers or Justice League) or temporarily (to boost sales – as with every Wolverine team-up ever). Licensing legalities can make it hard for this sort of thing to crossover into games, unless a deal can be struck with the publisher for an entire roster of characters to pop up in-game (as with Activision's first Spider-Man game).

The exception to the rule is Capcom's long-running Marvel Super Heroes 2D fighting series, which in turn has crossed-over again and clashed swords with the Street Fighter posse, and the combined battlin' prowess of other Capcom characters like Strider. Arch-rivals DC Comics managed no such arcade coup, but instead tried to mimic the idea on the SNES with the ill-advised fighting game, Justice League Task Force. With nine characters to choose from, you were left with Batman and Superman as the obvious choices, backed up by Wonder Woman and a bunch of second-raters such as Green Arrow, Aquaman and The Flash. Three villains were unlocked during the Story Mode, so don't expect any of the well-known Superman or Batman foes. Instead you got Cheetah, Despero and Darkseid.

Apart from the poor selection of characters, the game was stiff and sluggish, where Capcom's games were slick and sexy. Each character had a mere four moves on top of the standard punch and kick, and it was possible to win each fight with the same move over and over again.

# >Get Cape. Wear Cape. Fly.



It was announced in the early 80s that Scott Adams of Adventure International had entered into a deal with Marvel to produce a series of text adventures based on its characters under a new imprint called Questprobe. Each game would come with a free comic, and hopes ran high among the eager young comic fan community. After all, Adams was one of the pioneers of the text adventure genre and his company had become something of a byword for adventuring quality. Sadly, time has not been kind to these early forays into licensed gaming, and viewed with less gullible eyes, they're revealed as fairly shoddy efforts.

The Hulk was the first to hit the shelves, debuting on the PC, Spectrum and Commodore formats in 1984, followed by Spider-Man in 1985, and the Human Torch and The Thing (mysteriously only one half of the Fantastic Four) in 1986. Though the games improved with each outing, they were still hampered by the worst clichés of the text adventure genre. Limited locations, sparse graphics and a restricted parser were all present and (in)correct, while Adams' fondness for ferociously cryptic solutions to obtuse puzzles upped the frustration levels to Galactus levels. With little atmosphere or relation to the comics, the joys of spending three hours working out you had to 'bite lip' to turn into the Hulk and get out of the first room were slim.

Originally planned as a series of 12 games, Adventure International went out of business halfway through production on the fourth entry, The X-Men. By that point, few people mourned.

# >True Brit







Britain has always had a healthy stock of gaming talent, and in the 1970s and 80s was no slouch in the comic arena either. It comes as no surprise then that several British comic properties found their way to the computer screen during that time.

2000AD birthed the most spin-off titles, though the first character to make the leap from the printed page surprisingly wasn't the magazine's big star, Judge Dredd. Instead, the Mighty Tharg dipped his first green toe in gaming waters with 1984's Strontium Dog, the mutant bounty hunter, who appeared in two different games, one for the Spectrum (The Killing, a top-down shooter) and another for the Commodore 64 (Death Gauntlet, a side-scroller). Both published by Quicksilva, the Spectrum game was written by amateur coders who luckily offered it to the company just as they were about to launch the C64 title.

Gaming of a more wholesome kind sprang forth in 1986, thanks to stalwart boys comic Eagle, as Virgin unveiled their first Dan Dare game for the 8-bit home computers. A colourful platform shooter, it sold well and spawned two sequels, although it's not clear how Dare's gung-ho blasting would have gone down with Frank Hampson, his staunchly decent stiff-upper-lip creator. 1986 also added two more characters to Tharg's gaming line-up, Rogue Trooper headlined a decent shoot-and-explore adventure from Piranha Interactive, and – at long last – Mega City One's fiercest lawman finally joined the party. This first Judge Dredd game was an action-adventure from Melbourne House for the Spectrum and C64 in which you selected crimes to respond to and then switched to a platform shoot-em-up to dispense the justice.




1987 saw things get weird, with two games from Martech. Firstly, the gruesome world of Nemesis The Warlock was transformed into a violent platform game in which the bodies of fallen foes could be stacked to reach higher levels, and only months later, Celtic warrior king Slaine showcased a highly unusual control method – players had to click on thoughts floating in Slaine's mind in order to make him perform tasks. Both were experimental but generally poorly received.

Judge Death and Halo Jones games were both in development during 1988, from Rogue Trooper developers Piranha Interactive, but the company folded before either could be released. The proto-FPS Death game was reworked as Horror City and the emulator ROM of the original version has since leaked online, so the curious can still give them a spin with a bit of Googling.

As the comic entered a troubled period in the 1990s, so the 2000AD games' teat started to dry up. Dredd and Rogue Trooper both put in passable but uninspired outings on the Amiga and Atari ST, the 1995 Dredd movie resulted in a standard scrolling shooter spin-off, and 1997 saw a rather average Dredd lightgun game for the PSOne. Now that games company Rebellion owns and publishes the revitalised comic, and has turned out a fun FPS in Dredd vs Death, let's hope we'll get more games plucked from the rich soil of 2000AD's archives.



# The Uncanny X-Men




Much like Spider-Man, the antics of the X-Men didn't reach the big screen until only a few years ago, so their gaming spin-offs have also stayed true to the comics rather than Hollywood's version of them. Sadly, the games industry has never come up with a way to fully capture the intricate and complex soap opera shenanigans of Xavier's brawling brood, so X-fans have had to make do with a hell of a lot of fighting games.

It wasn't always this way. 1988 saw The Uncanny X-Men blast their way onto the NES in a top-down role-playing game, not unlike the early Final Fantasy titles. You could choose from a pleasingly wide number of characters from the comics (not just the 'famous' ones) and the story was sophisticated enough to allow two alternate endings depending on your in-game choices. In a similar vein, the C64 offered Madness In Murderworld the following year, an arcade adventure in which you could use a sub-menu to pick up and use objects and powers. A nice idea, it just made things more complex than they needed to be.

In 1991, the mutants made their way to the smoky, bunking-off-school environs of the local arcade in a rather impressive scrolling beat-em-up from Konami. As well as boasting beefy, colourful visuals and blistering gameplay, it also allowed up to six people to play at the same time, meaning that gamers could finally recreate the epic scale team battles made famous by the comic. Of course, there was always the small matter of who got to be Wolverine...

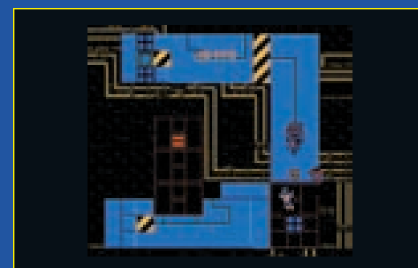
Now, anyone who knows anything about the X-Men knows that from the 1980s onwards, they were a bit like a popular indie band with a sexy female lead singer ‹208› good as a team but you always knew it was a matter of time before she released her solo album. Rummaging in the guts of this tortured metaphor, what I'm trying to say is that Wolverine was the sexy singer, and a solo career was inevitable. Thus it was that the man also known as Logan made his self-titled debut on the NES in a limited but admirably faithful platform-hopping affair that culminated with Wolverine shoving arch-enemy Sabertooth over a cliff, just like the comic. Adamantium Rage came along in 1994 for the SNES and Megadrive and managed to mix decent brawling with solid level design.

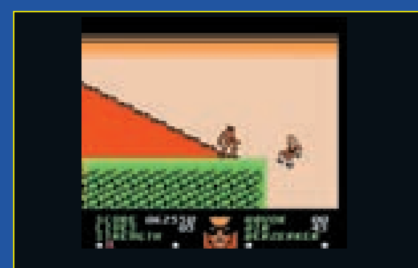
Needless to say, with the 16-bit consoles came better graphics but also a switch to more generic games. Thanks to the success of the coin-op, and with Wolverine established as the nominal star, fighting rather than teamwork and exploring was now the focus for all X-Men games. X-Men: Mutant Apocalypse on the SNES from 1994 owed the most obvious debt to the arcade machine, with its large sprites and button-mashing combat. Although it lacked the relentless pace of the coin-op, it was still a great – if shallow – rendition of the characters. The Megadrive's self-titled X-Men and its sequel, Clone Wars, were similarly chunky slices of mindless slaughter.

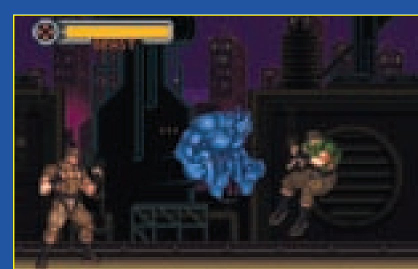
1994 also saw the release of an arcade machine that would send the X-Men characters off in a whole new direction. Children Of The Atom by Capcom transplanted the heroes and villains of the series into a 2D Street Fighter style fighting game, offering insane combos, secret moves and wildly over-the-top finishing strikes. It was a huge hit, and paved the way for a series of spin-offs. Bizarrely, the last salvo of the 16-bit era came from the 8-bit Sega Master System (and handheld Game Gear) with Mojo World, a 1996 platform romp that, while endearing, had long since been overshadowed by its more muscular competition.

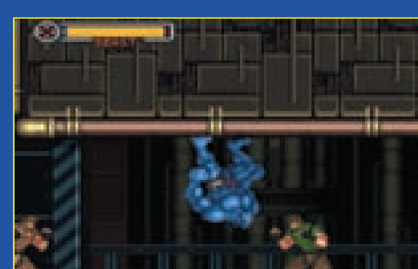
The PlayStation brought the team back after several years in gaming limbo with a flurry of 3D fighting games inspired by the blockbuster movie, but they couldn't live up to the clean and simple 2D grace of Capcom's arcade offerings. And as for the future? Well, Raven Software is working on something that may sound familiar – it's an X-Men team-based RPG called X-Men Legends. Maybe someone should tell it that the NES beat them to it 16 years ago.


X-Men – Coin-Op


X-Men – NES


Wolverine – NES


X-Men-Mutant Apocalypse – SNES


X-Men-Mutant Apocalypse – SNES


Wolverine-Adamantium Rage – Megadrive




# >A World of Heroes!

**There are more superheroes and villains out there than the Big Four who always seem to get all the attention. Indeed, when you start rummaging around in the archives it's surprising which characters have been deemed worthy of a game, while others languish in oblivion. Here's a quick rundown of some other heroic entities from yesteryear deemed too obscure, or simply too rubbish, to be worthy of more in-depth chatter...**

Captain America and the Avengers was the self-explanatory title of a 1991 coin-op and NES home conversion. Choosing from Iron Man, Hawkeye, The Vision or Cap himself, it was a fun scrolling, fighting and shooting game with a veritable who's who of crap Marvel villains to duff up.



Prior to Ang Lee's psycho-drama movie, The Hulk stomped all over various Nintendo and Sega formats in a trudging platformer where being hurt would, confusingly, turn you from the Hulk into Bruce Banner.

The Punisher may never have been an A-list star in the comics but his fondness for firearms made him a winner with gamers. He's starred in everything from an Operation Wolf style shooter on the NES, to an overly complicated Atari ST and PC adventure, and a fun two-player arcade beat-em-up with Nick Fury, Agent of S.H.I.E.L.D.

Still on the Marvel tip, the morose Norrin Radd graced the NES with his powers cosmic in a one-of-a-kind Silver Surfer game. It's not good. In fact, it's so bad even Galactus refused to devour it.



DC fans have been poorly served outside of the numerous Batman and Superman games. The Flash disgraced himself with a lousy NES platform game which did little with his supersonic speed.

Fans of Len Wein's creepy American gothic Swamp Thing should steer well clear of the NES travesty bearing the same name. It's a lumpy jump-and-dodge game in which the Earth elemental is usually killed three screens in by a floating Coke can. Seriously.

Todd McFarlane briefly managed to fool comic buyers into thinking Spawn was anything other than a slap in the groin, but his repeated attempts at gaming fame have come up short. From a generic SNES scroller, via several tedious fighting games, to the just-released Spawn Armageddon, there's not a decent game among them.

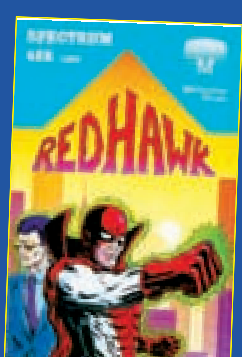


Fans of the late lamented superhero spoof The Tick will probably glean some enjoyment from a suitably obscure SNES title featuring the big blue lummox. Gameplay is predictable but it has humour to spare.

You can also relive the foil-embossed comic cover-hoarding glory days of Image Comics with another SNES obscurity, Wild C.A.T.S, based on Jim Lee's bland team comic of the same name. It's a Final Fight rip-off with giant sprites and no imagination.

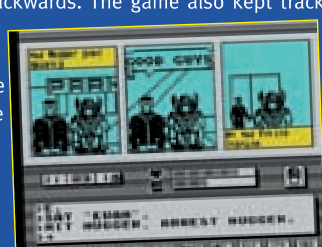
And finally, though it wasn't based on a comic, several game versions of Sam Raimi's underrated superhero satire Darkman crept onto home systems, with the Amiga version being the most varied and the NES version being the most impossibly difficult. RG*

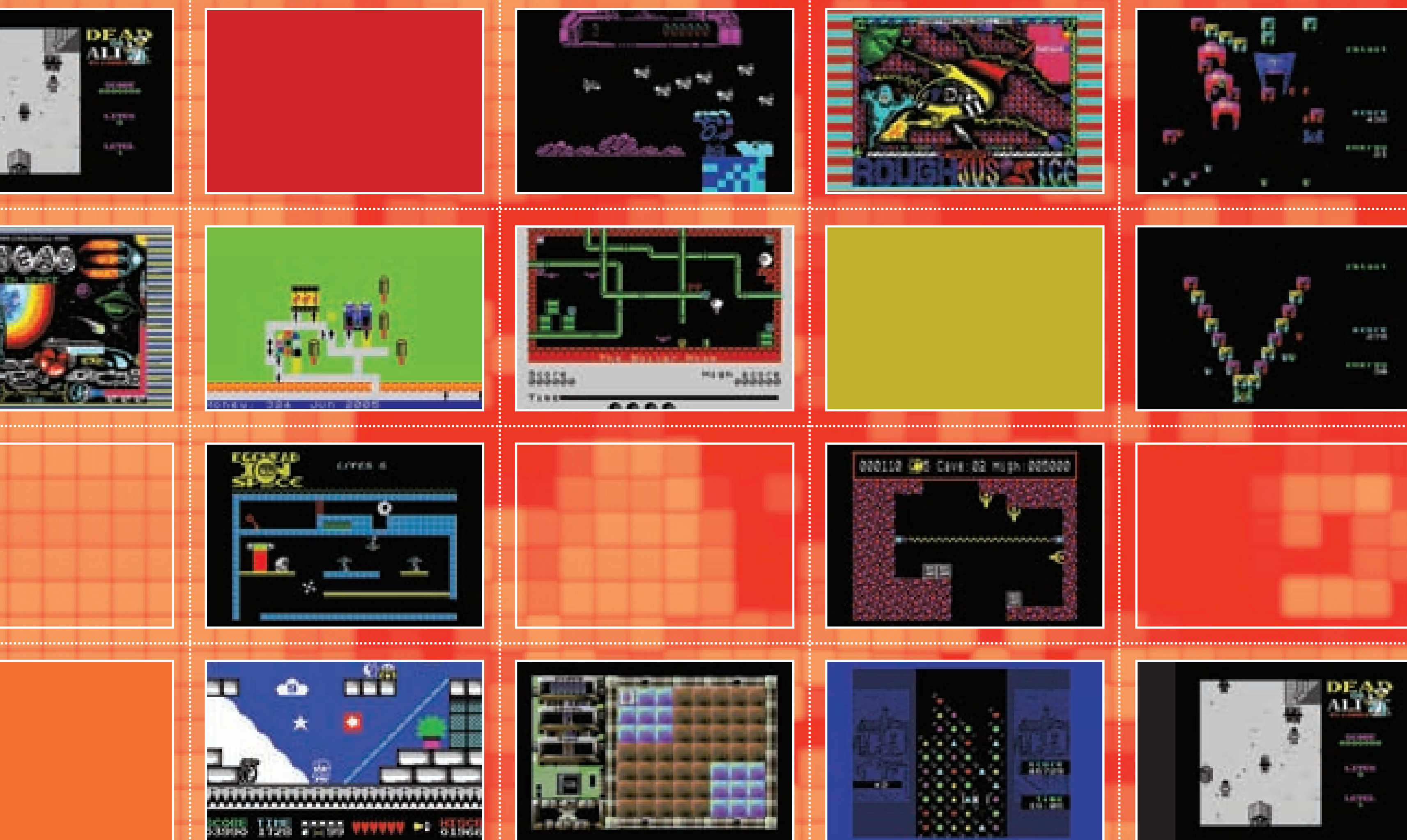
# >KWAH!



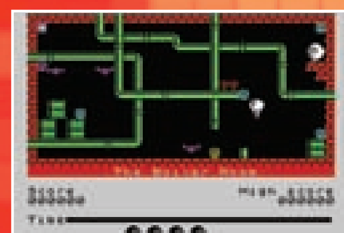

No round-up of gaming superheroes would be complete without offering up a heaped bucket-load of respect to Melbourne House's 1986 spandex do-gooder, Redhawk. OK, so it wasn't based on a real comic and thus shouldn't be eligible for this feature, but as with all retro enjoyment, sometimes fond memories allow us to bend the rules.

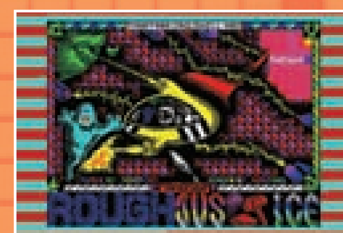
A C64 and Spectrum text adventure, Redhawk was more successful at capturing the Silver Age exuberance than most official Marvel or DC games of the same period. Text was entered at the bottom of the screen as usual, but a real-time comic strip display at the top of the screen transformed your leaden prose into lively action, as mild-mannered photographer Kevin Oliver battled crime in the guise of Redhawk, transforming from hero and back again with the Captain Marvel-esque cry of 'KWAH!' – which is, of course, 'hawk' spelled backwards. The game also kept track of your good deeds, and if you allowed too many perpetrators to escape, other characters would refuse to help you. Rightly hailed on release for its innovation and slick presentation, Redhawk went on to appear in a hurried sequel, simply called Kwah, the same year and then vanished from sight forever.

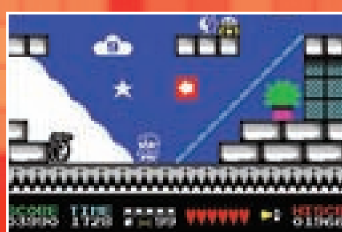


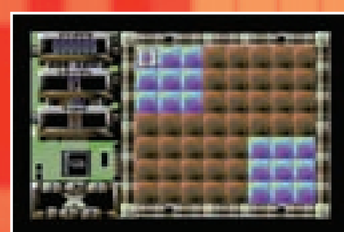




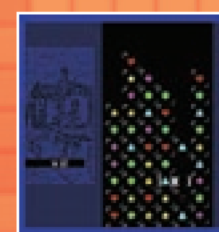


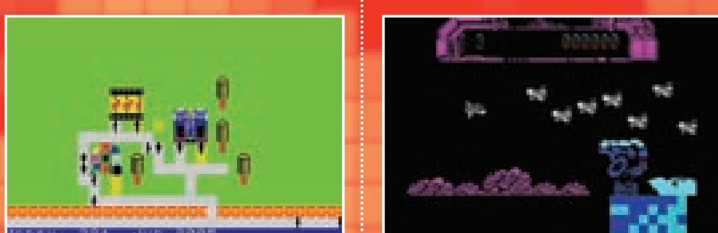


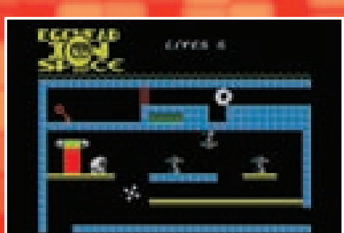












# Cronosoft Chonicles

**Have you written a program for an 8-bit computer? Would you like to have it marketed and published by a software house? If so, you need to speak to Cronosoft. Martyn Carroll did just that, and discovered gaming like it used to be**

I first became aware of Cronosoft one day in January this year, just after the first issue of Retro Gamer went on sale. The post on this particular morning contained two very different packages: one contained a review copy of the latest PlayStation 2 game from Sony; the other contained a review copy of the latest ZX Spectrum game from Cronosoft. You could say it was one of those moments.

I can't even remember the name of the Sony game, but the Spectrum game was called Rough Justice and it was written by Jonathan Cauldwell. I emailed Simon Ullyatt, the man behind Cronosoft, and thanked him for sending the game. I also had a few questions to ask.

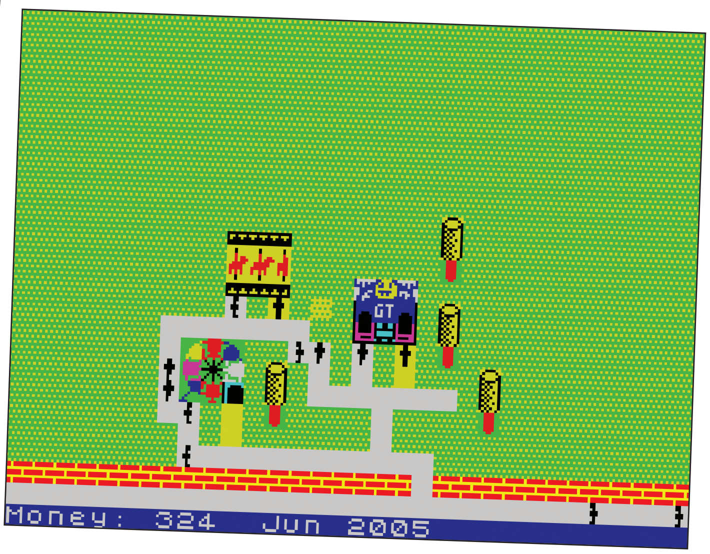


Egghead in Space was the first game released on the Cronosoft label












Hop 'n' Chop is listed in the World of Spectrum top 100 games round-up

**Retro Gamer: Please tell me more about Cronosoft. What does the company do?**

Simon Ullyatt: Cronosoft is a software label, dedicated to releasing new software on retro platforms. We sell the games through our website (**www.cronosoft.co.uk**), and by mail order – shipping worldwide.

Whilst there are lots of other people making and releasing new games for old formats, as ROM files for use in emulators, we are slightly different in that we provide the software on a cassette, with a full colour inlay – pretty much like you would have bought 15 or 20 years ago.

I believe that a lot of the enjoyment in gaming stems from the anticipation of waiting for the game to drop through the letterbox, actually loading and playing the game on the real machine, and then, having a nice-looking product to keep as part of a collection. I think it's a good thing for the authors of the software to see their work as a physical product, that people enjoy, rather than another downloadable game lost in an ocean of downloadable games.

**RG: The quality of the inlays is excellent. How do you achieve such professional results?**

SU: I've done some of them myself, and some I've had help with from a great artistic whiz called Tommy Pereira from the US (who has also designed some of the loading screens for our games). The inlays are produced in a simple way with good old gloss photo paper and a decent quality photo printer.

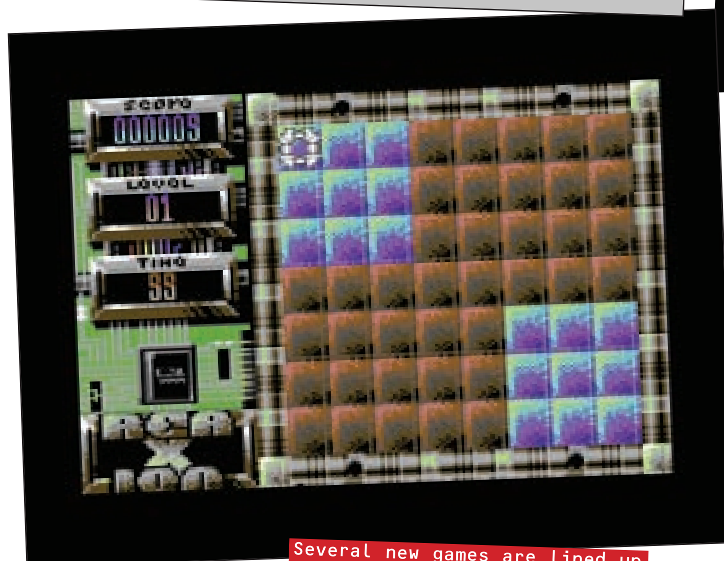






More Tea, Vicar? is the new side-scrolling shooter from Jonathan Cauldwell




Several new games are lined up for release on the Cronosoft label in 2004




**RG:** How much does a typical Cronosoft title cost and how is the money split?

**SU:** Generally, our games cost either £1.99 or £2.99 each – this more or less depends on the title itself. If it's a brand new unreleased title, then it will be priced at £2.99. Alternatively, if the game is an updated version of a freely downloadable game (as with our very first release, Egghead In Space) then the price is the lower £1.99

Out of a typical £2.99 game, around a third is taken up with production costs – professional quality tapes, duplication, inlays, credit card processing fees etc. A royalty of £1 per unit sold is then passed on to the author as a royalty, and the remainder is ploughed back into the label.

**RG:** The majority of Cronosoft games to date are for the Spectrum. Do you plan to release games for other platforms?

**SU:** Certainly! I'd love to be able to release games on as many platforms as possible. Primarily we have Spectrum titles, with one title each for the BBC and C64 platforms, but I would love to see releases for the Dragon 32, Atari 800/XL/XE, Amstrad CPC, Oric/Atmos, ZX81 and others. More unusual systems, such as the Sord M5, Laser 200, Sharp MZ are also a possibility – I'm not sure we'd sell many copies, but I'd love to give it a try! In the long-term, my ambition is to provide console games – whether they be CD-based, like the Amiga CDTV/CD32 and Sega Mega-CD, or cartridge-based, like the Atari 2600.

**RG:** What titles do you have lined up for release in 2004?

**SU:** Games in the pipeline include Plan 9 Channel 7, which is an arcade platformer for the Spectrum. The bizarrely titled More Tea, Vicar? is a game that we're very excited about – it's a side-scrolling shoot-em-up in the R-Type vein. We also hope to bring out a cassette version of the great arcade puzzler for the C64, Reaxion. There's also talk of bringing out a BBC version of Egghead in Space.

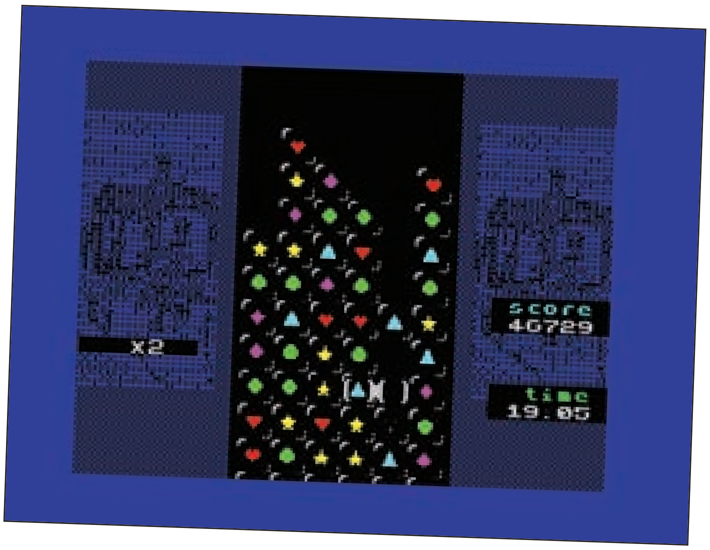
**RG:** How do you feel about emulation?

**SU:** Emulation is an important part of gaming these days. There are good and bad points about it. The good points are that it's so convenient, and it allows people access to all manner of systems, without the need to actually own them. It's recreated the spark that got us all into gaming in the first place.

The negative aspect is that in some ways, we're all spoilt for choice. I believe that by downloading hundreds of games for use with an




Rough Justice is a great-looking shooter in the style of Cybernoid




# Code speak

Cronosoft's most prolific programmer is Jonathan Cauldwell, and his latest game Fun Park has just been released for the Spectrum. The game was originally titled Amusement Park 4000 and entered into a coding competition in which programmers had to produce a game in either 1Kb or 4Kb of memory. Jonathan's game was runner-up in the 4Kb category, and Fun Park is a very much expanded version of the original game. It will still run on the 16Kb Spectrum mind, and is available for £1.99 from the Cronosoft website (www.cronosoft.co.uk). I recently spoke to Jonathan about his programming history and the appeal of writing new games for the Spectrum.

RG: How long have you been writing Spectrum games?

JC: I started writing games in the late 1980s, initially selling them myself via mail order. In 1989 I wrote Egghead, a 40-screen platformer which was the first of my games to appear on the Crash Powertape. Egghead was a character initially inspired by Blob from Starquake, although some would suggest he's more like the Oliver Twins' Dizzy. Other games included Haunted House, another platformer where the idea was to collect various keys scattered around the screens and make good your escape, and Megablast, a vertically-scrolling shoot-em-up similar to the Amiga game Goldrunner 2. Both Haunted House and Megablast appeared on Your Sinclair covertapes.

These games were written in my bedroom on a battered old Spectrum +2 with a copy of LERM Z80 Toolkit and a Spectrum art package called Artist 2.

RG: Did you have a good relationship with Crash and Your Sinclair?

JC: Very good, although perhaps as a warning of what was to come, Crash was a little late paying for my contributions, but they were always pleasant and professional people when I spoke to them on the telephone. Your Sinclair, on the other hand, was as nutty as a slice of fruitcake, and much of the correspondence I received from them was as warped and deranged as anything printed inside the magazine – even the legal stuff was a little bizarre. What's more you could be certain that they would rename my characters with daft names such as Derek Cracklybrownpaper, and dispense with the carefully crafted plots to any game I submitted. That said, I'd have happily continued to write games for the magazine as long as it remained in circulation. Alas, it closed in Summer 1993 and my final submission, a shoot-em-up called Squamble, never made it to the covertape as the final issue didn't have one.

RG: How did you become involved with Cronosoft?

JC: It all started with Simon posting a message on the World of Spectrum forums in early 2003. He wanted to launch a software house to publish new games for 8/16-bit computers, and was looking for programmers. This coincided with me having just written Egghead in Space. I also had a couple of games that I'd written in the mid-1990s which were simply gathering dust on the shelf. There had to be some way to make these games available for Spectrum gamers, and Cronosoft provided the perfect opportunity.

RG: What exactly is the appeal of developing new games on old platforms, as opposed to writing PC remakes?

JC: It's partly the challenge of writing games using the limited resources of the original machine. I know what the hardware limitations are and how much memory I can use, so it's a question of finding the best way to overcome the problems and produce a good game. Writing original games also affords a programmer the freedom

emulator, the user doesn't give a game their full attention in the way that we used to before emulation existed. It's just a case of download, play for five minutes, and onto the next game. There's often no will to really get involved in the whole game-playing experience in the way we did in the 1980s.

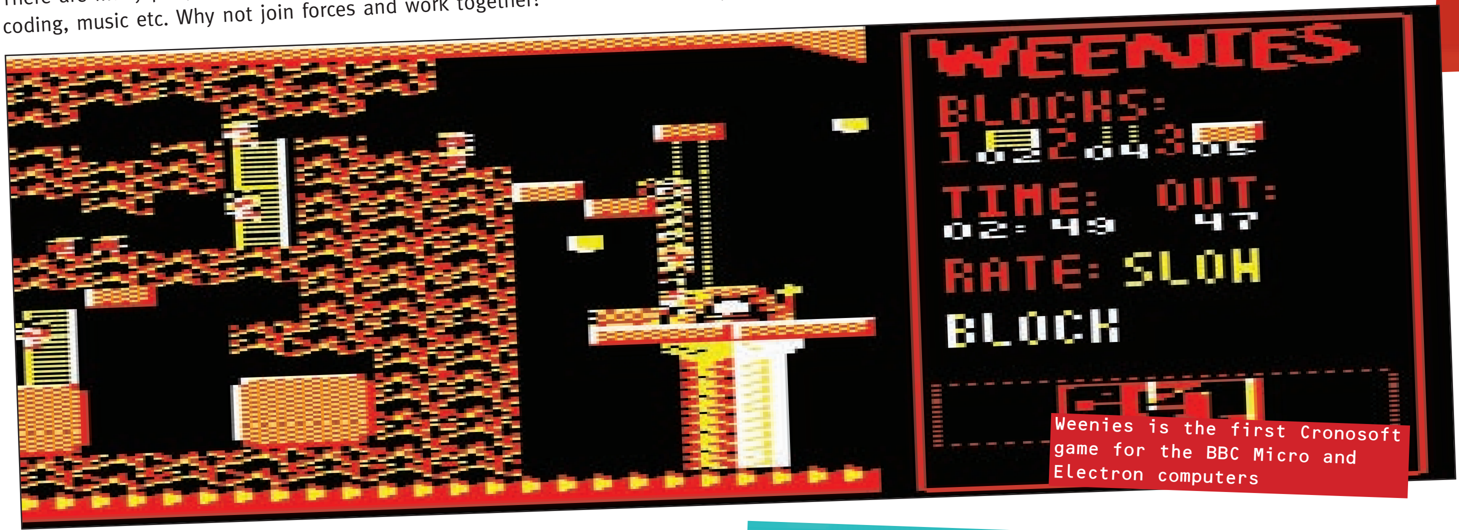
From the other side of the fence, emulators are very useful when it comes to developing software. Many years ago, the typical bedroom coder would have a bog-standard computer on which to produce their games. Emulation gives programmers a variety of development machines all in one box, with a hard drive, graphics tools, sound sampling tools, a decent keyboard, built-in machine code monitors... the list goes on. With these resources, it's much easier to produce an 8-bit game than it used to be.

**RG: Besides buying Cronosoft games, can Retro Gamer readers help in any way?**

SU: Definitely. Write a game for us, or send one in that you've already written. Just about any format at all. Don't be shy – we won't bite! A lot of people have expressed a desire to write a game for us, but lack the confidence to do so. If the game isn't up to our usual standard, then we'll let you know how it can be improved. Great games don't have to be about fantastic graphics, and they don't have to be written in 100% machine code. There are many good games written using compilers, or tools such as The Quill. It's the final result that matters. There are many people about with various skills, whether it be graphics, coding, music etc. Why not join forces and work together?

**RG: Finally, if you could put out one unreleased game on the Cronosoft label, what would it be?**

SU: I'd love to be phoned up by Rare and offered Mire Mare for release! I'm sure there would be plenty of buyers! On a serious note, it would be extremely nice to be able to put out any unreleased game – I'm sure that there are many people that have 90% finished projects lurking away on tapes and disks, that for one reason or another have never seen the light of day. One of our releases, Hop 'n' Chop, is such a game, and it now resides in the Top 100 Spectrum games list on the World of Spectrum website.




Weenies is the first Cronosoft game for the BBC Micro and Electron computers

to innovate and try new things instead of having to stick to the spirit, or even the letter, of an earlier game. Most of all it would be a crime to allow the magic of these old machines to die, and by writing new games for old formats we are helping to keep the spark there.

I often see topics posted on retro gaming forums along the lines of 'what was the best Spectrum game ever written?', or some such, and yet nobody ever pauses to consider the possibility that it might not have been written yet. There might even be someone reading this magazine now who has a Spectrum megagame in development!

**RG: Fun Park runs on a 16Kb Spectrum. How difficult is it to cram games inside such a small amount of memory?**

JC: For a 48Kb Spectrum game you typically have around 41Kb available and this is more than enough for most games, but this is reduced to just 9Kb for a 16Kb Spectrum game. Writing games which are memory efficient usually means slowing them down, and on older formats it's often a tricky balancing act as both memory and processor speed restrict the things you can achieve. When push comes to shove, a good designer can identify which gameplay elements are essential and which can be removed to produce the best results. As far as writing games inside 4Kb or less goes, the situation becomes almost impossible as you're fighting for every byte.




**RG: Is game creation purely a hobby, or do you work in the industry?**

JC: In the early 1990s, programming became a career for me as well as a hobby, and through a series of accidents, I found myself writing very dull warehousing systems instead of games for a number of years. These days, I develop software for fruit machines. Actually, it's not unlike writing retro games in many ways and it's definitely a challenge. Best of all, I get to sit at a computer keyboard, drinking tea and hammering out code all day. What could be better than that?





# >Gaming On The Go

In a market currently dominated by the GameBoy Advance, it's hard to imagine a time when many other companies pitted their own handhelds against Nintendo. While the majority of these machines failed, some of them were worthy opponents and are well worth tracking down today at cheap prices. In this feature Kim Wild explores the hidden depths of the handheld world...

## GameBoy

While the Game and Watch range had proven to be successful in a market flooded with handheld LCD games, Nintendo wanted to create a machine with true mass market potential. To that end, the manufacturer released the GameBoy in 1989. Despite its limited display (only four shades of grey cleverly tinged with yellow to give the illusion of more colours) and no backlit screen, it had one major advantage over its rivals - superior battery life. With a set of four batteries lasting over 10 hours compared to the three or four hours offered by the Sega Game Gear and Atari Lynx, the GameBoy was an undeniable success. The decision to bundle the handheld with a copy of Tetris cemented the GameBoy's success, and within the first three years 32 million units were sold.

Nintendo managed to maintain the GameBoy's winning streak with the release of key franchises such as Super Mario and Zelda. In 1996, a sleeker version was released in the form of the GameBoy Pocket, which was technically the same as its predecessor only with improved contrast, higher screen definition and slightly longer battery life. The release of Pokémon Blue and Red created a massive upsurge in sales, with GameBoys being purchased specifically for these games, effectively preventing any competitors from gaining a foothold on the market. In 1996 the GameBoy Color was released, with its full-colour screen and updated specs, although it was compatible with the huge catalogue of original GameBoy games. Then in 1998 the GameBoy Light was released in Japan. This was essentially the GameBoy Pocket with a backlit screen. However, the machine didn't sell as well as expected and is undoubtedly one of the main reasons why the original GameBoy Advance was unlit.




## Atari Lynx

Designed by Dave Needle and RJ Mical at Epyx, the Atari Lynx was originally known as Handy and was conceived in 1987. However, Epyx was struggling financially and needed to find a partner to help distribute its product, so invitations were sent out to various companies. Nintendo wasn't interested, but Atari was keen to re-establish itself within the industry and they reached an agreement. Atari would handle the production and marketing of the system and Epyx would deal with the software development. Atari subsequently showed the system off to the press at the 1989 Computer Entertainment Show with the working title Portable Color Entertainment System.

Priced at US$199/£140, the Atari Lynx was launched in 1989, the same year as the GameBoy. While the Lynx had a backlit colour screen, it drained battery life, with six fully charged AA batteries lasting less than four hours. Software support was limited too. The launch package included California Games, a carrying case, a ComLynx cable and an AC adapter, but there were very few killer titles to appeal to the public.

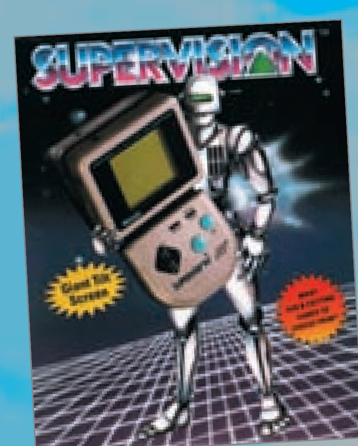
In 1991, Atari released a standalone pack just containing the console at US$99. This helped to improve sales, but Nintendo was still very much in the lead. A re-modelled version of the Atari Lynx (namely Lynx II) was quickly released and had several improvements over the original machine. Equipped with a better joystick, sleeker design, superior stereo sound and slightly longer battery length, sales did improve somewhat, but the Lynx II didn't make much of an impact overall. The Sega Game Gear also arrived in '91 and although both consoles suffered from the same technical shortcomings, the Game Gear had the edge thanks to titles like Sonic the Hedgehog, Columns and Shinobi. With the Atari Lynx struggling to stay in the market and developers reluctant to commit to the handheld, Atari stopped promoting it and in 1993 focused on its next console, the Atari Jaguar.

Despite not being a commercial success, the handheld did feature some great games such as APB, Paperboy, Klax, California Games and Chip's Challenge. These days, the Lynx is definitely worth picking up since most games can be bought quite cheaply.




## Quickshot Supervision

The first version of this handheld was released around the same time as the original GameBoy and was similar in design (only using four shades of monochrome green). It was released in Denmark by VN Toys and throughout Europe (France particularly) by Audiosonic. The second version of the machine was released in 1992 throughout the US and the UK. The improved model was re-branded as Quickshot (makers of various joysticks). In order to appeal to the budget conscious, games retailed from £10 to £30, although the quality of these left much to be desired. A TV link adapter was also released so gamers could hook the machine up to a television and play on the big screen. With even less screen visibility than the GameBoy, the machine was phased out pretty rapidly.



# >Game & Watch







**Nintendo launched its famous Game and Watch range in 1981. Designer Gunpei Yokoi had been experimenting with new technology and came up with the idea of credit card-style LCD games. As a conventional joystick wouldn't fit onto a Game and Watch, Gunpei created a cross-shaped pad (known now as a directional pad or D-pad) to be able to move players in four directions. Hiroshi Yamauchi patented the controller for Nintendo and the pad has been used on every Nintendo system since, including variations on the theme for other consoles.**

**Throughout the 10 years that the range was on sale, many different types of Game and Watch were available, including Silver, Gold, Widescreen, Multi-screen, Panorama, Super Color, Micro vs and Crystal. Depending on the title and condition, prices for individual games can vary, with the very first Game and Watch Ball in the Silver range fetching anything up to £600. Since that very first release, Game and Watch titles have gone on to sell over 40 million units.**

**Those of you who want to relive those titles without forking out a small fortune can buy individual games in the Mini Game and Watch range, which remain perfectly playable despite the age of the games. There are also Game and Watch cards that can be bought for use with the E-reader and a GameBoy Advance. Various Game and Watch Gallery compilations have also been released for the GameBoy formats, usually including extra unlockable goodies.**




## NEC PC Engine GT

Selling at US$299 (£150 in Europe) at launch in 1990 (and still going for within that price range even now), the PC Engine GT was by far the most expensive handheld ever released and as such was only ever going to be an option for the flush hardcore fraternity. PC Engine GT (known as TurboExpress in the West) was essentially a portable console that could play PC Engine (JPN) and TurboGrafx-16 (USA) games, using HuCards as a storage medium. The technical aspects of the machine outclassed anything else on the market (reflected in its high price tag) but this in itself meant, once again, the backlit screen and high-quality colour display led to short battery life. A power adapter was essential to get the most out of the machine.

The crisp active-matrix colour display was the GT's main appeal and unlike the other colour handhelds, blurring, fogging or vision difficulties were never a concern. As with the Game Gear, a TV Tuner was released for the system and the handheld had a dedicated slot specifically for this function. Two machines could also be linked up for two-player gaming, but the bulkiness of this meant it wasn't really advisable on the move.

Sales of the handheld were undermined by NEC's control of the PC Engine market, and the GT was dragged into the abyss once the PC Engine met its demise. Weak distribution and marketing outside Japan, in addition to its steep price, meant that only hardcore gamers purchased the machine.




## Sega Game Gear

Having already enjoyed success with the Master System and Megadrive, 1991 saw Sega mount its attack on the portable market with the Game Gear. Launching at £130 with Sonic the Hedgehog, the Game Gear was around £50 more expensive than the GameBoy.

In comparison to the pocket size of the GameBoy, the Game Gear was positively huge and the small amount of battery life (again down to the colour, backlit screen) meant that it was never really portable. The screen at times also suffered from a blurring effect, particularly when lots of action was taking place in the game. However, its strong line-up of games, often targeted at a more adult audience, did mean it enjoyed reasonable success. The D-pad was also more responsive than that of Nintendo's machine.

Along with the usual accessories (screen magnifiers, link cables, power adapters etc) that were available for all handhelds, the Game Gear boasted a couple of unique add-ons in the form of the TV Tuner and Master System Converter. The TV Tuner meant the Game Gear could receive television signals, while the Master System Converter enabled the handheld to play any Master System game, dramatically increasing the console's back catalogue of software and giving it a slight edge over the competition. While this converter could play all Master System titles, any games that were sprite based or contained a lot of text were barely playable due to the re-sizing and blurring effect.




## Nintendo Virtual Boy

Jumping on the early 1990s' VR bandwagon, Nintendo came up with the idea of creating a portable machine capable of reproducing 3D images. Nintendo President Hiroshi Yamauchi commissioned the R&D departments to design games for the console and other companies followed suit. In November 1994, the console was unveiled to the press at Spaceworld, Japan, before being exhibited at the following Computer Entertainment Show in Las Vegas. The machine was received with mixed reactions, and the attending press criticised its use of only one colour (red) and the uncomfortable position necessary to actually play it.

Undeterred, Nintendo released the Virtual Boy to the Japanese public in July 1995, with the American release occurring later that year in August. Four games were available at launch, namely Mario Tennis, Red Alarm, Teleroboxer and Galactic Pinball. However, from the very beginning, the machine was doomed to failure. Retailing at US$180 in the US, it was deemed too expensive for mass market success, and parents began to lodge complaints as children were getting headaches after playing the machine for a few hours. Slow sales prevented third parties from developing games, with only 770,000 units sold by the end of the year. While this is a notable achievement despite the machine's teething problems, it failed to match Nintendo's projected sales figure of 1.5 million for the same time period. The machine never made it to Europe.




# >Best Of The Rest

**Along with the main handhelds, there were a series of lesser-known consoles that were released and quickly disappeared into obscurity. Here's a quick rundown of what could have been...**

## Microvision

Designed by Jay Smith, who later went on to develop the Vectrex, the Microvision appeared in 1979 and was the first ever LCD cartridge-based system. While initially successful, taking US$8 million in its first year in America, the lack of support and the release of only two more cartridges at launch meant it died a quick death.

## Coleco Total Control

This was one of the original cartridge-based systems (released in 1981), although only four games were ever released for it. Bundled with the Football game, the remaining three games were Basketball Hockey and Soccer, which were sold together as an add-on pack.

## Barcode Battler

Released by Tomy in the '90s, this handheld let two people battle fighters through the use of product barcodes. A selection of barcodes was included with the package and the handheld allowed you to use barcodes found on items to create characters of various strengths. While a nice idea, the handheld was never really more than a novelty device.

## Pokemon Mini

Never really a proper handheld, but was launched in the US and Europe with four cartridges containing Pokémon-themed outings. The screen display was purely black and white, although shock sensors and infrared capabilities were built into the unit. The four games included Pokémon Pinball Mini, Pokémon Puzzle Collection, Pokémon Zany Cards and Pokémon Party Mini. Other games were only released in native Japan.

## Cybiko

A general multimedia device aimed at kids, the Cybiko had to be used in conjunction with a PC in order to install and download software. Kids and teenagers could message, chat, and play games wirelessly with others around them. It also featured a crude email program.

## Famicom GameAxe

An unofficial pirate handheld built in the style of the Game Gear that was never released outside Asia (for copyright reasons, naturally). Its appeal came in the ability to play any Famicom cartridge (or NES game with an adapter). Very collectable, with a GameAxe in mint condition fetching over £70.

Throughout its lifespan, 22 games were released including the highly rated Wario Land, Space Invaders (in true 3D), and Mario Clash, an arcade puzzle game. Various high-profile franchises were in development before the project was canned, including GoldenEye, Virtual Tetris, VB Bomberman, Mario Adventure and G-Zero (an F-Zero clone), and it would have been interesting to see whether these games had any impact on the machine's popularity.



## Sega Nomad

Basically a portable Sega Genesis (Megadrive), the Sega Nomad was released in 1995 and could only play Genesis titles. It never had games created especially for it, instantly limiting its appeal to fans of the Genesis. Launching at US$200 (there was no European release) and receiving very little in the way of publicity, the Sega Nomad had a backlit screen like the Game Gear. Again, battery life was non-existent and the screen suffered from some blurring problems, but the Nomad had the added advantage of being able to hook it up to a TV screen. It even had a port for a second controller for multiplayer games.

With so little marketing support from Sega, very few took to the console and it wasn't long before the price plunged to US$60 to offload stock. For those of you wishing to get hold of one of these machines, be aware that it is region encoded and will only play American Genesis titles.



## Tiger Game.com

After dabbling in the LCD game market, the Tiger division of Hasbro decided to launch its own handheld in 1997 at the bargain price of US$60. More ambitious than other rivals, the Game.com incorporated Internet capabilities and PDA functions with a touch screen that could be used with its own stylus. The handheld did manage to build up a varied catalogue of games, with titles such as Sonic Jam and Resident Evil 2 eventually appearing on the handheld. However, many of the games were difficult to play due to poor screen visibility.

Reeling from poor sales, Tiger released the Game.com Pocket Pro in 1999 at the

# >The State Of Play




Despite Nintendo holding the handheld crown for some considerable time, additional handhelds have started to crawl out of the woodwork. The Nokia N-Gage launched little over a year ago, combining mobile phone technology with gaming, and while it hasn't been a huge success due to the awkwardness of the machine and its high price, a successor is in the works. The GamePark 32 (currently only available in Korea but available to buy online) combines games with emulators, MP3 playback and movie capabilities. It has proven to be a huge success among the 'homebrew' community and will hopefully receive a European launch in the near future.

The Tapwave Zodiac is already available to buy online (priced US$299-399) and features many of the capabilities of the GP32, being based on Palm OS technology. Open source, the machine can also play movies and MP3s, and currently has various first- and third-party developers such as Sega, Activision and Midway creating games.




Sony is currently gearing itself up for a slice of the portable gaming pie with the PSP (PlayStation Portable), which is reported to be almost as powerful as a PlayStation 2. If these reports are true, the PSP will be the most powerful handheld ever manufactured. However, all this processing power, along with a large backlit screen and a disc drive (to spin its proprietary 60mm game discs), could lead to the same short battery life problems that have plagued the history of handhelds. But if Sony can learn from these mistakes, maybe Nintendo's reign will finally come to an end.

Of course, Nintendo isn't sitting back, and it recently announced the development of the DS (Double Screen) system. It harks back to the multi-screened Game and Watch titles and is said to be a standalone handheld and not a replacement for the GBA SP. Whatever happens, you can be sure that the Japanese giant will do anything to protect the market it has made its own.

even cheaper price of US$30. This edition was a marked improvement, with a smaller design that made it easier to play. Sadly, visibility (and dire software) still caused problems. Finally, Tiger released the Game.com Light. This was the same as the Pocket Pro but with a backlit screen, although the effect was barely noticeable. The system was never released outside of the US.

## Bandai Wonderswan






Following the success of Bandai's range of Tamagotchi virtual pets, the company decided to launch an assault on the handheld market with a new console. Gunpey Yokoi, the genius behind the GameBoy, had started up his own LCD key ring company after being sacked from Nintendo. Recognising his potential, Bandai offered him a job to come up with a machine to better Nintendo's design – *his* design. Hence, the Wonderswan was born, and although it was created specifically to rival the GameBoy, the technology for the handheld was very similar and therefore sold at a cheap, affordable price. Gunpei Yokoi was given a free hand in designing the machine and even created Gunpey, the machine's very first game.

The Wonderswan suffered from the same problems as the GameBoy, with the screen blurring when displaying quick movements and only slightly superior sound quality, but it did possess a high-resolution monochrome screen and two sets of controls for vertical or horizontal play.

The Wonderswan Color followed soon after and was exactly the same as its predecessor except with the addition of a colour display (not dissimilar from the GameBoy Color really). As a result, the machine managed to amass a decent following in Japan with plenty of third-party support. Its stylish design, long battery life (one battery lasted around 40 hours, beating the GameBoy Color quite admirably) and good selection of games meant that the handheld enjoyed considerable success. Unfortunately, none of the Wonderswan consoles were released outside Asia and as such, its overall popularity was limited. Bandai went on to release the Swan Crystal, a redesigned version of the Wonderswan Color with higher specifications, but the appeal for the console had waned by this point and production was called to a halt in 2003.

## Neo Geo Pocket






Launched in October 1998, the original Neo Geo Pocket was never released in the UK, but its sharp monochrome display, battery backup and battery life of 40 hours meant it had true potential to take on Nintendo. The basic model was quickly followed up by the colour version, and this *was* launched in the UK in March 1999 at the cheap price point of £60.

The Neo Geo Pocket Color was superior in many ways to the GameBoy Color. Its full-colour TFT LCD screen boasted improved visibility and the micro-switched thumb pad meant that the controls were far more responsive than a standard D-pad. The 20-hour battery life held up well against Nintendo's machine and the 16-bit CPU meant that Neo Geo arcade titles could be ported across easily. Established franchises such as Puzzle Bobble (Bust-a-Move), Metal Slug and Fatal Fury were added to the catalogue and even Sega released versions of Sonic the Hedgehog and Puyo Pop for the handheld. An NGPC-to-Dreamcast cable was released in order to link up the two consoles and unlock features in specific games, but only a handful of titles supported the function. Building up stats in the NGPC game King of Fighters R2 meant that they could be uploaded to King of Fighters 99 on the Dreamcast, and Cool Cool Toon (Dreamcast) linked with Cool Cool Jam (NGPC) unlocked other bonuses. Rather remarkably, Europe was treated with far more respect than other territories, with Sony lifestyle-type adverts appearing in the press and games sold in hard-back sturdy cases instead of the cardboard boxes used in America.

However, due to the lack of third-party support and games mostly consisting of beat-em-ups, fruit machine simulators and card battle titles, the console failed to excite the public and retailers were left with hundreds of unsold machines. Even Japan, the nation with a penchant for all things pocket sized, lost interest quickly and after seven months on sale, the price was cut from 8,000 yen to 6,800 yen (£45 to £35). Three years later, with SNK struggling financially to stay afloat from its declining Neo Geo sales and arcade profits, the company filed for bankruptcy. Despite the machine's unfortunate demise, it has amassed quite a following and many European boxed games, such as Metal Slug 2, Evolution, Dive Alert, Cardfighter's Clash and Faseli, can fetch anything from £30 to £100. RG*

# >Handheld Price Guide

Like many consoles, prices for each handheld differ depending on where they are purchased and what condition they are in. Here's a rough guide as to the price you should expect to pay, with the lower end of the scale applying to handhelds in worn condition with no box

## Atari

| | |
|---|---|
| Lynx | £20-30 |
| Lynx II | £30-40 |

## Bandai

| | |
|---|---|
| Wonderswan | £10-20 |
| Wonderswan Color | £20-40 |
| Swan Crystal | £40-50 |

## GamePark

| | |
|---|---|
| GP32 | £80-100 |
| GP32 (backlit model) | £110-130 |

## Milton & Bradley

| | |
|---|---|
| Microvision | £10-30 |

## NEC

| | |
|---|---|
| PC Engine GT | £150-200 |

## Nintendo

| | |
|---|---|
| GameBoy | £5-10 |
| GameBoy Pocket | £10-20 |
| GameBoy Color | £20-30 |
| Virtual Boy | £75-100 |
| Pokémon Mini | £20-30 |

## Sega

| | |
|---|---|
| Game Gear | £30-50 |
| Nomad | £75-150 |

## SNK

| | |
|---|---|
| Neo Geo Pocket | £10-20 |
| Neo Geo Pocket Color | £40-80 |

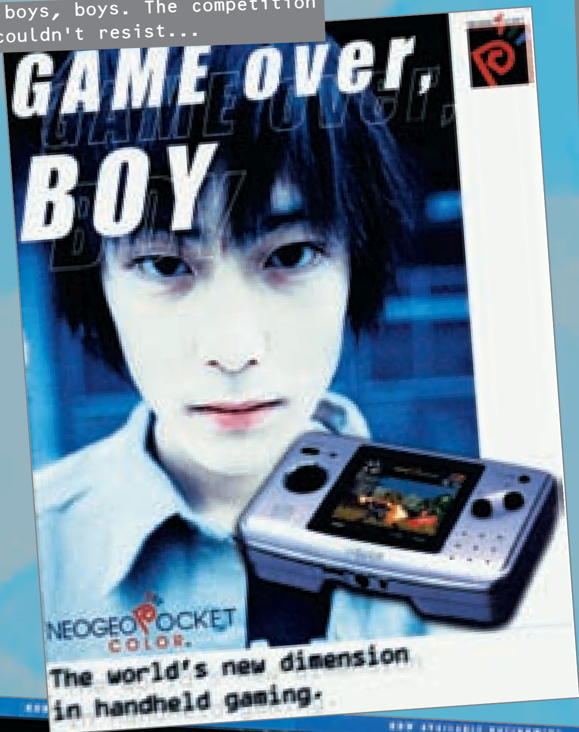
## Tiger

| | |
|---|---|
| Game.com | £10-30 |

## Quickshot

| | |
|---|---|
| Supervision | £10-30 |

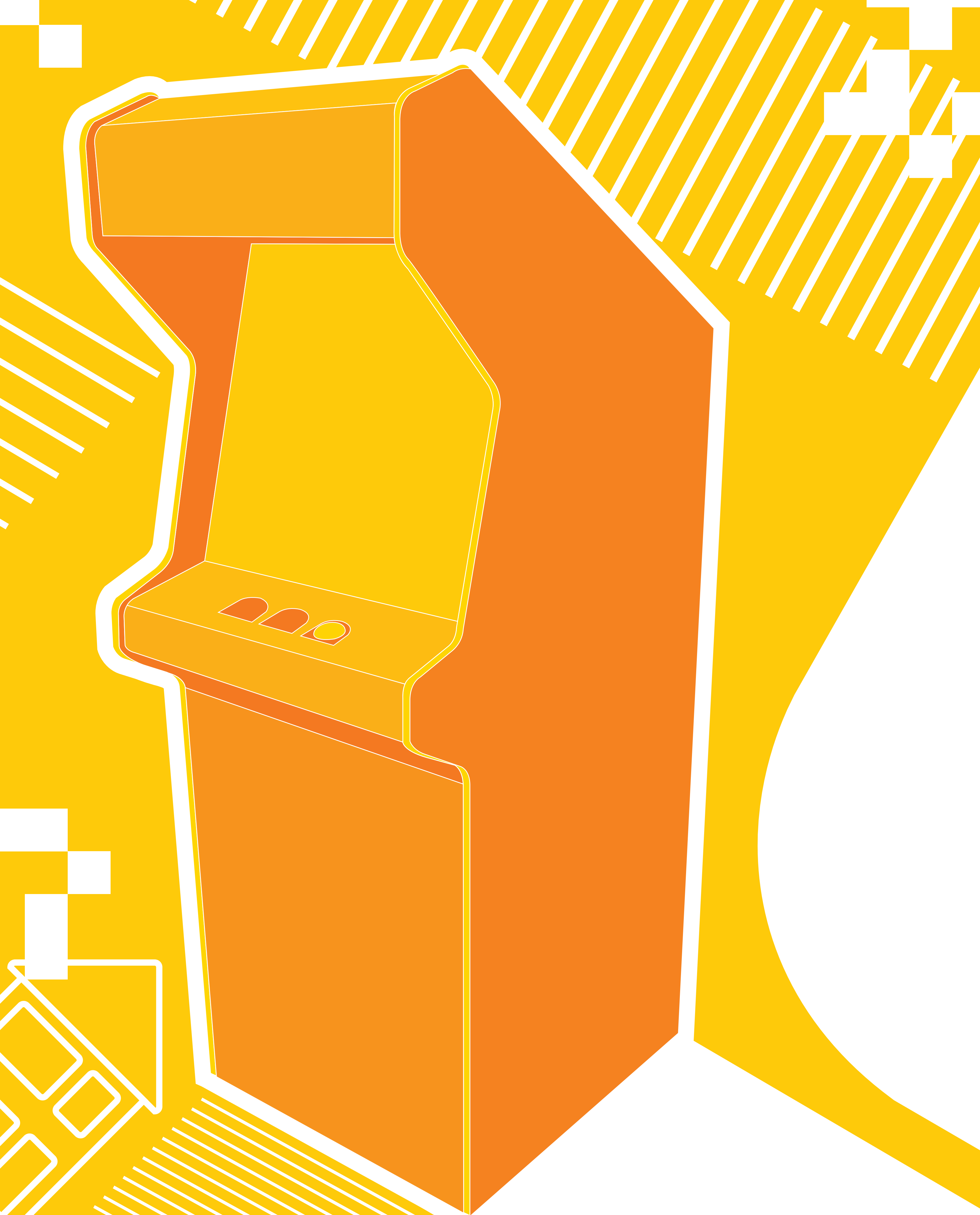
Boys, boys, boys. The competition just couldn't resist...











# >Arcade at Home

**Collecting retro computers and consoles is one thing, but what about the arcade machines you used to ply with 10 pence pieces? For many collectors, these machines are the ultimate prize, and restoring them to their former glory is just part of the fun. Retro Gamer invites five arcade enthusiasts, all active members of the Jammaplus forums (www.jammaplus.com), to share their experiences**

## JAMMA explained

JAMMA (Japanese Amusement Machine Manufacturers Association) is a standardised wiring scheme introduced in 1985/86 and used in many arcade machines. To understand JAMMA, it helps to think of a typical machine as two basic parts. First you have the cabinet itself – the wooden 'cab' houses the monitor, the control panel, the speakers, the power supply and the coin mechanism. Then you have the PCB (Printed Circuit Board). This contains the game itself in the form of ROM chips.

Before JAMMA, each manufacturer used their own wiring schemes, and even these sometimes varied from game to game. This made it very difficult to place a new PCB into an old cabinet, at least without extensive rewiring work. The JAMMA standard solved this problem by allowing games from different manufacturers to be used in any compatible cabinet. Basically, if you have a JAMMA-enabled cabinet, you simply need to slot the PCB into the connector and away you go. It's a bit like plugging a cartridge into a console. Well okay, it can be more complicated than that, as some games (those with extra buttons or unique controls) use a slightly modified version of the JAMMA standard, but the idea is the same.




>WHO?

NAME: Alan Tyler
AGE: 37
OCCUPATION: Fine Art Lecturer
LOCATION: West Midlands

As long as I can remember, I've been a bit of a magpie and have always had in interest in redundant technology. When you think about the fact that the cutting edge of technology is constantly blunted, the notion that contemporary technology provides a continually shifting techno-zeitgeist snapshot is fascinating. If nothing else, these things are important as artefacts, redolent of the context and time in which they were created. Mix in a healthy dash of nostalgia and away you go.

Incidentally, I was never a great home-computer buff and although I owned a Spectrum and C64 way back, I always preferred playing games in arcades. I have particularly fond memories of an arcade in my hometown where I'd play Phoenix for hours.

In the past twenty years I have owned quite a few†arcade and fruit machines, but I have only *seriously* collected video arcade cabs for the past two years or so. Prior to that it was mainly consoles and handhelds. I've been well into car boot sales for a long time, so I managed to build up quite a collection console-wise. However, I've always felt that the actual experience of playing a†game in a cabinet with a dedicated interface was so divorced from playing the same†game on something like Atari Anniversary on the PlayStation, that sooner or later I'd take the plunge and start picking up actual cabs instead.

## My collection

I started out, as most people do, with a single JAMMA cab, although I soon realised that I wanted something different. I was just collecting PCBs at first, but soon started buying dedicated machines that I remembered playing in my formative years, like Defender, Centipede, Space Invaders, Asteroids, Star Wars and the like. As time has passed, I've actually got into older games – mid-70s black and white machines like Atari's Starship-1 and Midway's Sea Wolf. If you think about it, the earliest commercial coin-operated video game is only 32 years old. In terms of other technological histories, it's the blink of an eye. However, in terms of video gaming, 1971 is almost prehistory!

I'm really interested in acquiring even more early black and white games, because although gameplay can sometimes be quite†limited by today's standards, it's quite amazing the lengths programmers and manufacturer's went to in order to maximise not only the play but also the look and feel of the game. It's†pretty impressive what you can do with a few Kb of code, some cardboard, UV lighting and a half-silvered mirror!

## Buying machines

When it comes to buying cabs, it's amazing what's out there once you start to look! The usual list of online resources (eBay, newsgroups, forums etc) is a good places to start, but local arcade operator can often yield cabs and PCBs. I've also found stuff in skips, garden sheds, barns – all over the place! One of the major things I love about this hobby is the thrill of the chase. You never know where you'll end up and what you'll find when you get there – sometimes good stuff, sometimes junk! These days I also tend to buy more from other collectors and I'm just starting to import stuff directly from Europe and USA.

Probably my most exciting recent find was when a local arcade operator tipped me off about a machine stuck in an old stable. It was all pretty vague, but he said he thought it was an old Tron cab running 1943. And sure enough it was! Because Tron is quite a rare machine, I took it with a pinch of salt until I got there. Lo and behold, alongside a semi-derelict Mortal Kombat cab, buried under years of grime and dust, was a nice condition JAMMA-ed Tron. I paid £30 for it, took it home, cleaned it up and it worked! One rewire and a few imported parts later, it was up and running Tron again.

On the other hand, I'll never forget one very long (and expensive) trip by myself and several other collectors to view what was allegedly a huge stash of amazing cabs. Huge? Well, there were a lot of machines. Amazing? Hmmm... we certainly were amazed... at the terrible condition of 99.9% of the rubbish we were looking at. Water-damaged, rotten, incomplete, and what's more, frighteningly expensive. The deluded seller obviously thought he was sitting on a goldmine. As they say in the press, we made our excuses and left.

As for prices – how long is a piece of string? Prices are somewhat lower than they were a few years ago, though the market for machines seems to be pretty healthy. The usual 'classics' (Defender, Space Invaders etc) still make reasonable money, but a lot of the more interesting (and unloved) machines are still quite cheap. However, there are awful lot of people out there who will feed you a line and try and charge you the earth for cabs. If you don't know what you're buying, it can be a complete minefield. I've been very lucky with most of my machines and have managed to pick up some really good bargains. And there are still many bargains out there. It's a matter of research, building up contacts, and luck! Keep an eye on eBay, join the collector's mailing lists, check out your local free-ads papers and arcade operators. You never know what you might find.

> "There are still many bargains out there. It's a matter of research, building up contacts, and luck! Keep an eye on eBay, join the collector's mailing lists, check out your local free-ads papers and arcade operators. You never know what you might find." – Alan on tracking down a bargain.

## Keeping them running

Although I have no formal training in electronics, I have found that it has been absolutely vital to get to grips with at least some theory and practical knowledge. There is a huge amount of knowledge out there, and people are willing to share what they know in order to keep the games going. The Internet has made such a difference. Ten years ago it was like some kind of forgotten culture. No-one seemed to know much about these machines or where to get spares from. Cabs would be scrapped purely



because they had very little monetary value once they had ceased working properly.

Thankfully, these days people are much better informed and stuff is generally being saved rather than skipped. There are also a lot of people who now repair arcade machines/PCBs, and many tend to specialise in one specific manufacturer or game (which can be a godsend). Spare parts (controls, control panel overlays, sideart, etc) are now being reproduced and this fact alone has saved many tired machines from the skip. MAME is also incredibly useful as a diagnostic tool when repairing PCBs, and it's also great for finding out about games you have never heard of before!

Something else you need to become skilled in is woodwork. Cabinets were generally made from chipboard or, less commonly, plywood. Neither of which stand up to abuse over a long period of time. At the moment, I have at least one water-damaged machine which is slowly crumbling away to nothing... or at least, the bottom five inches are!

At any one time, I usually have more cabs not working than fully functional. Remember that some of these machines are over 30 years old and electronic circuitry of that age can be more than a little unreliable. If you trace the history of a typical game – i.e. running in an arcade, day in, day out, for the first few years of its life, perhaps being hacked up when being converted to JAMMA at some point, then potentially stored in unsuitable (possibly damp) conditions for years – it begins to become apparent exactly why they need a lot of care and attention.

At the moment, I own something like 22 cabs of various sizes and types (mainly uprights and a couple of cockpits). Most are stored at home, although I have sneaked a few into work! They range from machines that are in really nice condition and fully working, to others which are incomplete or are in need of a full rebuild/restoration. With more expensive or hard-to-find†items, the latter is often the†only option if you are on a tight budget.

When purchasing a cab you're often faced with the question of whether to simply get it running or do a complete ground-up internal and external restoration. Some collectors perform what almost amounts to miracles with their machines and produce simply stunning cabs after an awful lot of hard work. Personally, I quite like the patina of wear that years of play have given a machine so I tend to get the game working and take it from there. However, if a cab has led a particularly hard life you often have no option but to go for the long haul.

## The future

Recently, I'd say that my collection has been in a state of flux. I'm hanging on to some of the classics like Defender, Asteroids and Centipede, but I've now sold off a number of my newer (post-1983) machines and PCBs†in order to pick up more of the earlier black and white games. I've come to a point where I'm refining what I'm doing, collection-wise.

One of the main problems that any collector of cabs faces is lack of space (unless they are very lucky) and that's something I am presently looking at: I'm thinking of hiring some form of storage in order to expand my collection. There are quite a few cabs on my shopping list and at the moment I have nowhere to put any new purchases. Incidentally, I still collect all sorts of other retro-techno junk and thankfully I can combine some of that side of my collection with my day job. Space, it's definitely the final frontier!



## >WHO?

NAME: Kip Hakes
AGE: 22
OCCUPATION: Sales Support Manager
LOCATION: Essex

For a long time now I've been nuts about arcade machines. I played them as a youngster at Southend, and during holidays at Butlins. I pumped vast amounts of cash into the newest and latest games, and sometimes had to be dragged away by my parents at the end of the night. In the early 90s, companies like Datel started to release Superguns – wonderful devices that actually allowed you to play original JAMMA boards on your TV. I had to get one! Being only 12, and getting just £2.50 a week pocket money, saving up for a –100 Supergun was going to be hard. It proved far too hard, and after saving about £60 I blew it all on Mortal Kombat 2 for the SNES.

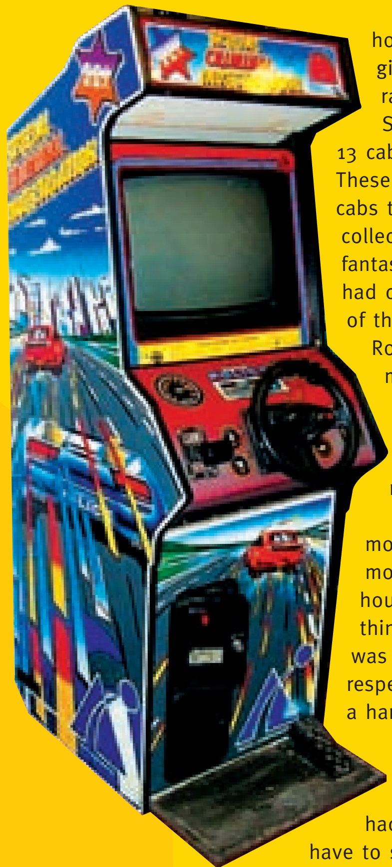
My passion for arcade cabs came to a head in my late teens when I bought my first ever cab. My collection grew from that point, then shrank, and disappeared. But after being out of the game for a while, I fell off the wagon and started collecting again.




## My machines

When I was 18, I realised I had to get an arcade machine. After scouting around the Internet, I found exactly what I wanted – a nice JAMMA Killer Instinct cab. I had no real comprehension of how big and heavy these beasts could be. On the day it was delivered I realised that I had bought one of the largest, heaviest, bulkiest JAMMA cabs you could get. It was so big that I had to dismantle it to even get it in the house!

Moving out of my parents



house and getting a place with my girlfriend gave me something of a rarity for a collector – space! Somehow I managed to squeeze 13 cabs into a smallish bungalow. These were cabs of my own, and some cabs that I was storing for fellow collectors. My arcade room looked fantastic when all the cabs were on. I had classics like Pole Position, Return of the Jedi, Defender and Roadblasters, and more modern machines like Crystal Maze and Pac-Mania. It was superb, although I did seem to find myself repairing the cabs rather than playing on them!

As time moved on, and after moving from the bungalow to a more sensible two up, two down house, the collection had to be thinned somewhat. So all the cabs I was storing had to go back to their respective homes, and I was left with a handful of machines, crammed into the second bedroom. Almost a year later, with the onset of a baby, I decided the collection had to go, or else the baby would have to sleep inside a cabinet! So with a bit of sadness I waved goodbye to my collection.

That lasted for around four months. I knew deep down I was hooked and I had to lay my hands on another machine. As space was now tighter than ever, it had to be a small machine and also a game I loved. After badgering a fellow collector, I finally persuaded him to part with his mini Midway Pac-Man cabinet. It wasn't in top notch condition, but I didn't mind. I wanted to restore it, and make it a real labour of love.

## My project

The Pac-Man cab seemed to have started out life as a Rally X cabinet. At some point in the past it had been converted with a dodgy looking kit into Pac-Man. I realised I could leave the cab as it was, but wanting a challenge, I knew I had to make it like the real thing.

Being a mini cab, it's a lot harder to find spares and repro parts for it. They do turn up on eBay US sometimes, but often go for silly amounts as they are fairly rare. So I had to improvise. As I needed a new metal control panel for it, and couldn't find any online, I turned to another collector who had befriended a metal fabricator. They were able to produce the exact panel I needed. The coin door on the cab had seen better days so I had to strip it, sand it, and re-spray it. I even bought a repro Midway metal panel for the front to finish it off.

All it needed then was a reproduction mini marquee imported from the USA, and a reproduction control panel overlay, and the job was complete! Now all I have to do is persuade the wife that a Space Invaders cocktail cabinet would make an ideal coffee table!

"As time moved on, and after moving from the bungalow to a more sensible two up, two down house, the collection had to be thinned somewhat. Almost a year later, with the onset of a baby, I decided the collection had to go, or else the baby would have to sleep inside a cabinet!" – Kip on lack of space



>WHO?

NAME: Craig Walker
AGE: 30
OCCUPATION: Pinball Sales/location
LOCATION: South Yorkshire

Like most blokes I've always been into most things electronic, whether it be stereos, TVs, consoles, computers or the latest gadget. I suppose this disease all started with an Atari 2600 games console but really took hold with a Commodore VIC-20. Ever since then I've always had a computer of some description and normally a console or two. This has led to all sorts of retro machines items taking residence in my house. Recently it all went one stage further as I quit my job as an IT engineer and decided to make a go of my video games hobby as a business. Now I spend most of my days with my head in the back of a powered up video game!

## My machines

It started out in 1986 standing at the side of an Outrun Deluxe – the big moving one you could actually sit in. Standing there amazed at how good this game was, I thought to myself one day I'm going to have one of these. Well about 13 years later I started looking for one. I couldn't find one anywhere and after a while I started to think it wasn't going to happen. I did track down another game I liked an awful lot – Championship Sprint by Atari, the sequel to Super Sprint. This was a lot smaller and a lot easier to find a home for so I bought it. I had this machine for a year or so but it had to go when I moved down south from Yorkshire.

I thought that was the end of it, but after moving back to Yorkshire, a work college was talking about buying a JAMMA cab. I thought I'd pick one up at the same time and then the hole ball started rolling again. After the novelty of the JAMMA cab wore off, I started to think of Outrun again, so I joined the UKVAC (United Kingdom Video Arcade Collecting) mailing list. After a few attempts, someone came up with news of one. I went to look at the machine

and it was fully working but in poor cosmetic condition. The fibreglass and metalwork were shot to pieces. A major restoration job was on the cards

I'd say this is where things turned for me and I really caught the arcade game collecting bug. Now there's no set pattern to my collecting except that I'm drawn to anything produced by Sega. I put that down to visiting arcades in mid to late 80s when Sega was really knocking out some groundbreaking games. The only other trait I've noticed is the games I'm looking for now are getting older and older, a lot of which were original released before I even set foot in an arcade. The only relatively modern game I want to own eventually is R360 – yes, that big thing that spins round 360 degrees in every direction! However, that is going to be a big project due to the cost of the machine and the sheer size of it.

## Buying machines

Machines are getting harder and harder to find and you don't get them for peanuts anymore. Most arcade operators don't want the hassle of selling them as they've had so many comebacks, and if you do get hold of one they often die a quick death as they've been standing for years and years. This is partly the reason I started my own business. There are lots of people out there who want arcade games but don't know what to do with them when they go wrong. Having a go at fixing your own machine is the equivalent of popping the back off your TV and trying to fix it. It's just as deadly too! However, a large proportion of serious collectors are willing to help you with any problems.



## >WHO?

NAME: Julian Kershaw
AGE: 34
OCCUPATION: Pipe Company Manager
LOCATION: West Yorkshire

I guess I was brought up on videogames. I was 11-years-old in 1980 and fascinated with all the machines in the arcades. I used to drag my parents into these places when I was on holiday and any other chance I got. In the town where I lived there were a few machines here and there, in cafes and shops, and these places would become my usual haunts as a child. I vividly remember playing Rally X and Phoenix to death in the Taxi Rank waiting room. When I was old enough to get the bus into the city, I discovered the big arcade which at the time had around 40 JAMMA cabinets. It was here I found my love for Nemesis and Salamander, and also for the Electrocoin Goliath video cabinet. When I started at college, I was always in that arcade, chucking those old 10p pieces into the machines.

## My machines



I've had machines on and off since around 1991. When I first started there was very little interest or information out there. You had to do all your own groundwork the hard way, by talking to people in the business. As with most collectors, I managed to get myself a JAMMA cabinet, which I traded for an old pair of hi-fi speakers, and a Salamander PCB which I paid £40 for. Following this I purchased a standard video cabinet with Terra Cresta inside, at a cost of £80 for the whole thing. I was well away, but still living at home with my parents and had no room for anything else. I also knew deep down I wanted to own Electrocoin Goliath cabinets, but 10 years ago they were still fetching good money in the trade and I realised I would have to wait. Still, I was buying the trade newspaper each week to get myself the inside info.

I moved into my own house in 1996 and it wasn't long until I got my garage built. This provided me with space for more gear. It was around 2000 when I started to get more involved and buying more machines, concentrating heavily on Electrocoin machines. Today my collection is quite big – I have machines at home, at work and in storage. It is my hope one day to have a unit to display these machines to family and friends.

## Buying machines

Finding machines isn't that difficult and with the Web, there are always people you can talk to for advice. It's always best to have a price in mind before you go look at a machine and not to let greed get in the way of negotiation. You may know yourself that you *really* want the machine, but it's best not to show it.

There are still some machines out there that can be picked up on the cheap. I almost got my hands on an Asteroids Deluxe for £50, but I wasn't quick enough and the machine was sadly destroyed. But this is the thing – if you know where something is, go and grab it! Cheap machines are everywhere. Just do the groundwork and you will be rewarded. I think the best deal I've had was three machines for £40. They weren't up to much but for the money I couldn't say no.

## Keeping them running

Ah, the hard work. I suppose when looking at a potential purchase, you have to consider the condition of the machine. It may look shabby, but if it's complete, it could be a great machine once again. Internally, anything can be fixed or replaced at varying costs. It's best to know the cab you are dealing with before you buy so that you don't end up lumbered with expensive parts to buy. Many an hour has been spent by myself cleaning up machines and getting them up and running – this is the way of the collector. You soon find you are spending more time fixing machines than playing them, but it's really worth it when you see the results.

## The future

Having the space is a problem – always has been, always will be – but I'm on the look-out for certain Electrocoin machines to improve my collection. I recently met the founder and managing director of Electrocoin, Mr John Sterdiges. The company doesn't really make many videogames anymore, mostly fruit machines, but as a manufacturer, I consider it vastly underrated. In the 80s, you couldn't visit a seaside town without seeing Electrocoin machines. I'm hoping to visit again soon, to gain more information on the history of the company and the machines it made.

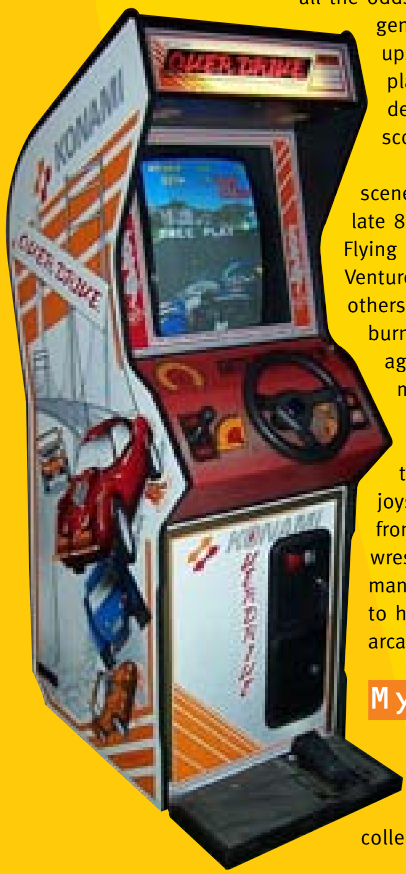


## >WHO?

NAME: Malcolm Laurie
AGE: 34
OCCUPATION: HTML Monkey
LOCATION: Scotland

## About me

I've always collected stuff – old cameras, gramophones, valve radios, toys – anything interesting which people used to entertain themselves in the dark days before PlayStations and Cable TV. Computers and consoles were the next step, and I quickly fell in love with videogames. I was particularly fond of Galaxian and Scramble, and the pure joy of blowing away hordes of aliens against all the odds got me hooked on one particular genre of arcade game – shoot-em-ups, or 'shmups' if you prefer. I'd play them over and over again in a desperate bid to obtain elusive high-scores and show off to my friends.




I followed the arcade shooting scene through the golden years of the late 80s, playing classics like Gaplus, Flying Shark, R-Type, Nemesis, Vulcan Venture, Twin Cobra and countless others, until the best local arcade was burnt down. It eventually opened up again, but housed nothing but fruit machines. Even though the PC Engine and Megadrive offered amazing shooters, I still loved the sense of playing with a solid joystick on a cab, nose inches away from the screen, and physically wrestling with it. So even though many classic shooters were converted to home consoles, I still needed my arcade fix.

## My machines

It all started with a Supergun and PCBs of Salamander and Side Arms. As any arcade collector knows, once these seeds are sown, the hobby can completely take over your wallet and home. Next, I bought a JAMMA cabinet, then another cab for vertical games, then another just for the fun of having three in a row, then some dedicated cabs of my favourites games from the 80s – Juno First, Galaxian, Centipede, and Phoenix. I really need to stop collecting cabs now, as my floorboards just aren't up to the job anymore.

But I just can't stop collecting shoot-em-up PCBs. These games offer pure reaction-based gameplay, often called twitch gaming, that's very hard to find in modern 3D titles. However, the late 90s witnessed a resurgence in shoot-em-ups, with the release of some incredibly intense and perfectly tuned titles, many of which were never converted to a home console. Because of the inherent 2D nature of the genre, the basic gameplay is essentially unchanged from Galaxian and Scramble, but more recent titles feature lots of clever bonus techniques, medal collecting premises, amazingly punchy soundtracks, beautiful hand drawn graphics, giant bosses, and swirly attack patterns with literally hundreds of bullets onscreen.

## The future

There is a rich, diverse and compulsively playable seam of gold for the shoot-em-up fan to dig for, spanning from about 1980 to present day – from early single-screeners like Galaxian, tactical and thoughtful horizontal scrollers like R-type, to bullet-infested technique-heavy vertical blasts such as Psyvariar. There are just too many good examples to mention, and I'll be collecting them for a long time before I get anywhere near completion, especially since they're still being made – Ketsui from Cave has just been released and ESP Galuda is on its way. RG*

# PCB prices

If you're looking to purchase PCBs, here's what you can roughly expect to pay for 20 of the most popular games. Starting with the most sought after...

| | | |
|---|---|---|
| 01 | Pacman | £150 |
| 02 | R-Type | £150 |
| 03 | Nemesis | £130 |
| 04 | Vulcan Venture | £120 |
| 05 | SI DX | £120 |
| 06 | Bubble Bobble | £90 |
| 07 | Moon Cresta | £80 |
| 08 | Galaxian | £80 |
| 09 | Hyper Sports | £80 |
| 10 | Salamander | £80 |
| 11 | 1942 | £80 |
| 12 | Wonderboy | £70 |
| 13 | Phoenix | £70 |
| 14 | Pang! | £60 |
| 15 | Jackal | £60 |
| 16 | Shadow Dancer | £60 |
| 17 | Pengo | £50 |
| 18 | Double Dragon | £50 |
| 19 | Street Fighter II | £40 |
| 20 | Green Beret | £40 |

# Machine prices

For the more serious collector, here is a list of 40 complete machines including many of the unique models that took pride of place in your local arcade. Prices are for machines in excellent condition, so expect to pay less for machines in need of restoration work...

| | | |
|---|---|---|
| 01 | Space Ace | £1500 |
| 02 | Star Wars (Cockpit) | £1500 |
| 03 | Tempest | £1500 |
| 04 | Tron | £1500 |
| 05 | Pacman (Yellow) | £1400 |
| 06 | Hang On (Bike) | £1300 |
| 07 | Outrun (Deluxe) | £1300 |
| 08 | Space Harrier (Sim) | £1250 |
| 09 | Defender | £1200 |
| 10 | Dragons Lair | £1200 |
| 11 | Frogger | £1000 |
| 12 | Galaxian | £1000 |



| | | |
|---|---|---|
| 13 | Star Wars (Upright) | £1000 |
| 14 | Gauntlet | £900 |
| 15 | Gorf | £900 |
| 16 | Spy Hunter | £900 |
| 17 | Marble Madness | £800 |
| 18 | Missile Command | £800 |
| 19 | Outrun (Upright) | £800 |
| 20 | Return Of The Jedi | £800 |
| 21 | Scramble | £800 |
| 22 | Asteroids | £700 |
| 23 | Dragons Lair 2 | £700 |
| 24 | Paperboy | £700 |



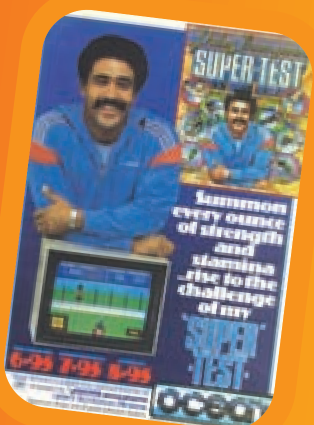
| | | |
|---|---|---|
| 25 | Space Invaders | £600 |
| 26 | Battlezone | £500 |
| 27 | Championship Sprint | £500 |
| 28 | Pacmania | £450 |
| 29 | Mortal Kombat 3 | £400 |
| 30 | Turbo Outrun | £400 |
| 31 | Virtua Racing (Sit Down Twin) | £400 |



| | | |
|---|---|---|
| 32 | Killer Instinct | £350 |
| 33 | Hang On (Upright) | £300 |
| 34 | Lethal Enforcers | £300 |
| 35 | Mortal Kombat 1 | £300 |
| 36 | Pole Position | £300 |
| 37 | Simpsons | £300 |
| 38 | Teenage Turtles | £300 |
| 39 | Pole Position 2 | £250 |
| 40 | Vindicators | £250 |



# 1985 advertising gallery















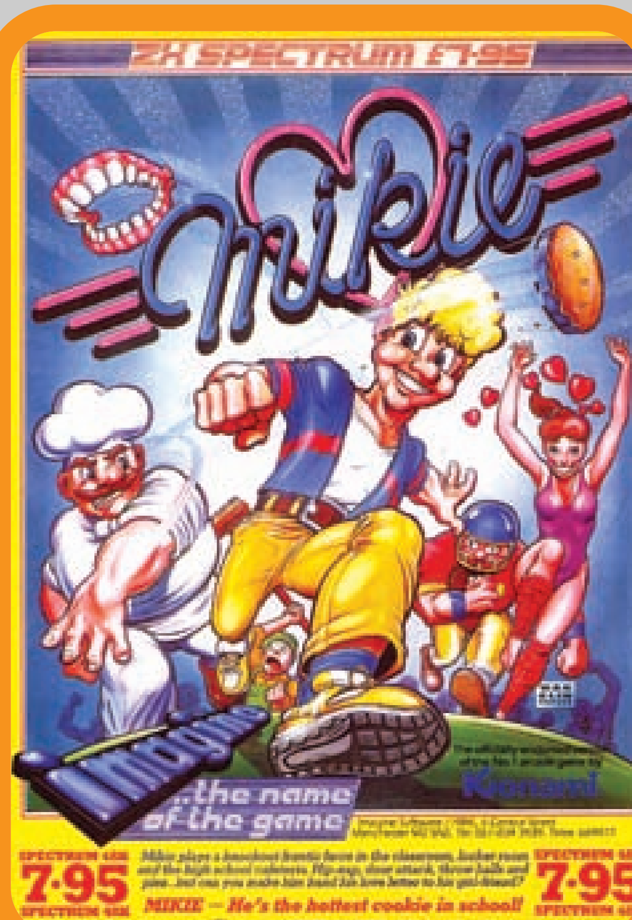
Slowly and surely, we're working our way through the decade, picking out classic advertisments from each year as we go. This time around we stop at 1985, and find magazines crammed with adverts for the latest Ocean, Imagine and Gremlin games. We've included a few for your perusal, plus the promotional brochure for the Spectrum 128 and a rare Amiga advert.


RAMBO™
FIRST BLOOD PART II™
OFFICIAL COMPUTER GAME OF THE BOX-OFFICE No.1 SMASH HIT. TAKE THE ROLE OF SYLVESTER STALLONE IN ALL THE ACTION-PACKED BATTLE SCENES.
RELEASED NOW
STALLONE
SPECTRUM 48k
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ocean
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Ocean House · 6 Central Street · Manchester · M2 5NS · Telephone 061 832 6633 · Telex 669977
Ocean Software is available from selected branches of: Boots, WHSMITH, John Menzies, WOOLWORTH, LASKYS, Rumbelows, Greens,
Spectrum Shops and all good software dealers. Trade enquiries welcome.


COSMIC
WARTOAD
SPECTRUM 48k
7·95
ocean


Daley Thompson's
SUPER TEST
Summon every ounce of strength and stamina ..rise to the challenge of my 'SUPER TEST'
6·95 7·95 8·95
ocean
Spectrum Shops and all good software dealers.


THE HUNCH IS BACK
Your favourite bell ringer, the all-conquering Quasimodo leaps back into action on another breathtaking epic with Esmerelda! Another superb Ocean extravaganza!
HUNCHBACK II
QUASIMODO'S REVENGE
SPECTRUM 48k
6·90
COMMODORE 64
7·90
ocean


ZX SPECTRUM £7·95
Mikie
Imagine
..the name of the game
Konami
7·95
MIKIE — He's the hottest cookie in school!
7·95


AMSTRAD £8·95
ZX SPECTRUM £7·95
COMMODORE 64 £8·95
Yie Ar KUNG~FU
THE ARCADE SMASH COMES HOME!
Imagine
...the name of the game
Konami
Imagine Software is available from: WHSMITH, John Menzies, WOOLWORTH, LASKYS, Rumbelows, Greens,
Spectrum Shops and all good dealers.
Imagine Software (1984) Limited • 6 Central Street • Manchester M2 5NS • Tel: 061 834 3939 • Telex: 669977


MONTY ON THE RUN
From the beginning of October
Spectrum 48K £7.95
CBM 64 £9.95
Also available:–
Amstrad £8.95
Spectrum 48K
CBM64
MONTY MOLE
Super fit and desperate for freedom, Monty makes his daring escape from Scudmore Prison. Hounded by the bastions of law and order, our frightened hero finds refuge with the criminal underworld who offer him his chance to breathe fresh air and bask in the sunlight once again. Moving from safe house to hideout to underground lair, Monty must select the correct five elements of his freedom kit from the many he's offered and not miss out on the hidden gold coins that will make him a mole of leisure.
At last he's free but can he make the cross-channel ferry on time?
Gremlin Graphics
Gremlin Graphics, Alpha House, 10 Carver Street, Sheffield S1 4FS. Tel: (0742) 753423.

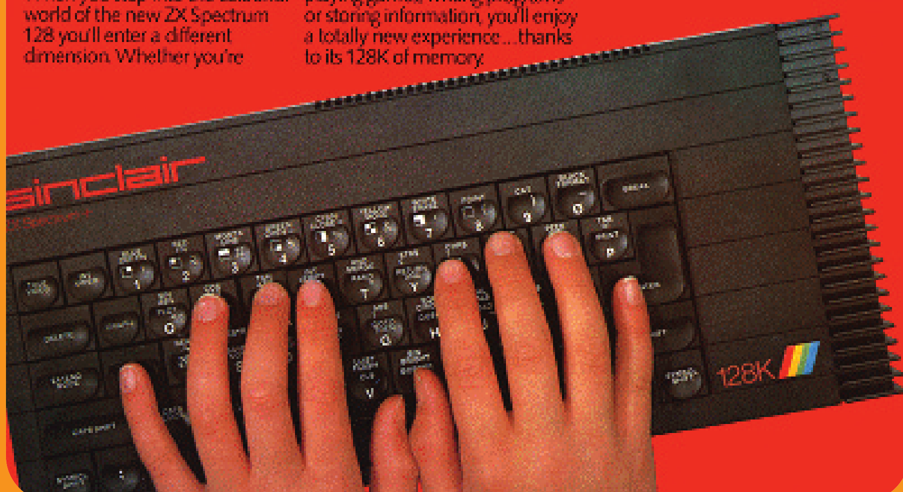

YOU'VE ALWAYS HAD A LOT OF COMPETITION.
NOW YOU CAN HAVE AN UNFAIR ADVANTAGE.
Nobody ever said it was going to be easy. But it just got easier. Now there's Amiga.™ The first and only computer to give you a creative edge. Amiga makes you look better, sound better, work faster and more productively.
You can't buy a computer at any price that has all of Amiga's features. Nor can you find one that's easier to use. Amiga lets you point at symbols instead of learning complicated commands.
Amiga is friendly, but it's a powerhouse, too. It has twice the memory of Macintosh™ or IBM® PC. It costs less than either of them and can do everything they can do, better.
No other personal computer gives you over 4,000 colors, stereo sound and incredible dimension. Imagine the advantage of preparing business presentations with color graphics and sophisticated animation right on your computer.
Need to make creative use of your time? Amiga can do as many as four or five things at once in separate windows on the screen. Not just display them. Work on them. No other personal computer can.
Amiga is IBM-compatible, too. A simple piece of software teaches Amiga to emulate the IBM operating system, so you can run most IBM programs. You'll have instant access to the largest library of business software in the world, including favorites like Lotus® 1-2-3, and dBase®.
And Amiga is endlessly expandable and adaptable. You can plug in printers (almost any kind), modems, musical keyboards, extra disk drives. You can even expand the memory to a whopping 8 megabytes with an optional expansion module.
See an Authorized Amiga Dealer near you. And don't wait. Your competition is gaining on you. Is that fair?
Amiga by Commodore.
Amiga's 4096 colors give your business graphics a visible advantage.
Amiga makes telecommunications fast, easy and colorful.
Amiga's 4 channels of stereo give you a sound advantage.
AMIGA GIVES YOU A CREATIVE EDGE.


Get your hands on a
ZX Spectrum 128
sinclair
ZX Spectrum +
128K
sinclair




# There's a world of difference in the 128

When you step into the colourful world of the new ZX Spectrum 128 you'll enter a different dimension. Whether you're playing games, writing programs or storing information, you'll enjoy a totally new experience....thanks to its 128K of memory.




## Bigger, better games

With 128K of memory, games on the ZX Spectrum 128 are bigger and more complex – which means that playing them becomes more exciting than ever. Adventure games are even more adventurous, competitive games more challenging.

There are lots of 128K titles already available. They're listed in a special leaflet included in every ZX Spectrum 128 – or ring 0276 685311 to get your free copy.

## Clearer screen display

We have improved the ZX Spectrum 128's performance to give an even better picture on an ordinary TV. You can also connect it directly to a colour monitor to give a superbly clear colour picture which makes games playing even more enjoyable.

## Sophisticated sound

Now you can make real music on the Spectrum. The 128 can play three separate notes at once, each of which can be individually controlled, allowing you to create fantastic music and amazing sound effects.

You can listen to the 128's sound either through the speaker in your TV or, for hi-fi reproduction, via an external amplifier. Your ZX Spectrum 128 can even control a synthesiser to produce more sophisticated sounds.

## All the games

The ZX Spectrum 128 can also run games written for the ZX Spectrum 16K, 48K and Plus – so you'll be able to play all your favourites as well as the rapidly growing number of 128K titles.

## Easy to use

We've made the ZX Spectrum 128 even easier to use. From the moment you switch on, the options available to you are shown on the screen – so for instance you can load a 128K program by simply pressing a single key and switching on your cassette player.

No other computer in the Spectrum's price range helps you in this way.

## Simple to program

The ZX Spectrum 128 has a built-in editor which makes program writing and editing easy. The editor allows you to move freely around the whole screen and correct mistakes simply and quickly.

The ZX Spectrum 128 checks each line of a program as it's entered. If there is an error in it, it will sound a warning and show you where you have gone wrong.

## Tape Tester

Some games are difficult to load because they are sensitive to the volume at which your cassette recorder is set. To make it easier to load such titles we have included a special 'Tape Tester' option in the ZX Spectrum 128. It is extremely easy to use and helps you to find the best volume setting for a 'problem loader'.

## Calculator

We have created a special 'Calculator' screen on which a record of calculations entered is displayed. This means that you can easily go back and re-work your entries if you have made a mistake.

## The system can grow and grow

As with the other Spectrum computers the ZX Spectrum 128 has a massive range of peripherals to let you expand your system. Now it's even easier to get that expansion, because the ZX Spectrum 128 has an extra socket into which you can plug either a printer or a synthesiser.

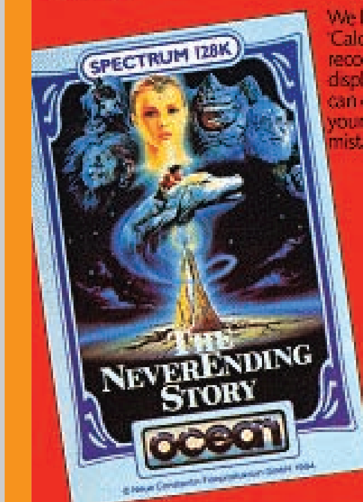
A special keypad is also available as an optional extra. It gives you greater control when you are using the full-screen editor and can also be used as a calculator or a 128K games controller.

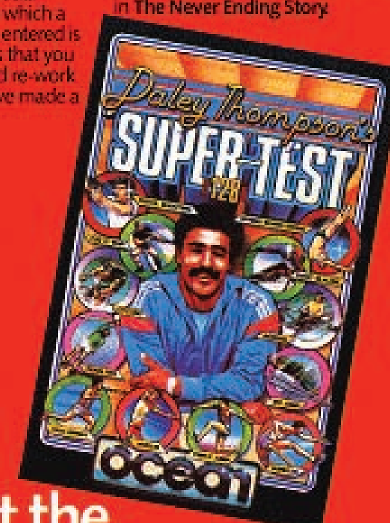
## Get started right away

When you buy a ZX Spectrum 128 you get two tremendous 128K games from Ocean – absolutely free.

Pit yourself against the world's greatest athlete in **Daley Thompson's Supertest**.

Try to save the Kingdom of Fantasia in **The Never Ending Story**.

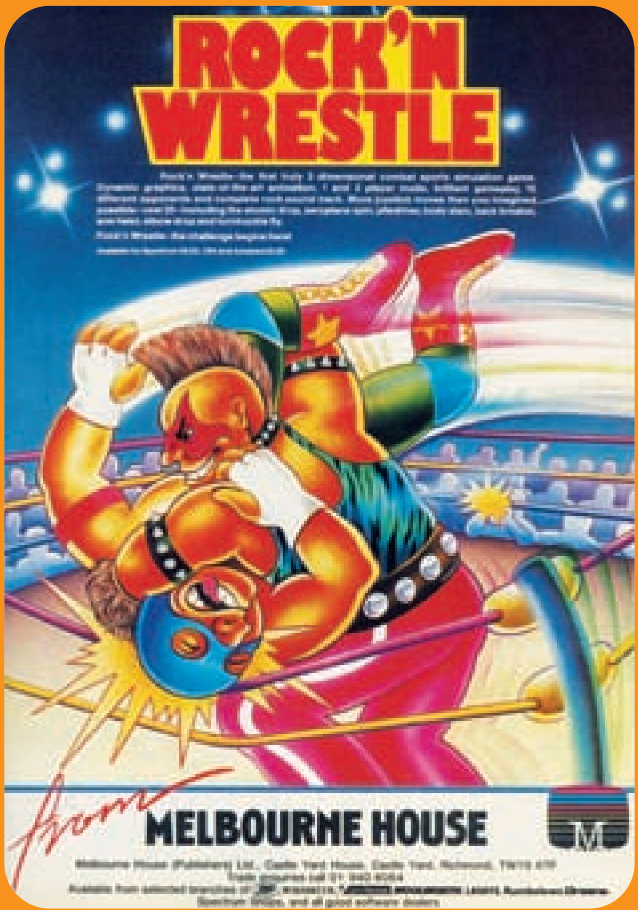



# You'll be amazed at the difference in the ZX Spectrum 128


Spaceflight epic
STARION
from Melbourne House


THE WAY OF THE
exploding fist
from MELBOURNE HOUSE


ROCK'N WRESTLE
from MELBOURNE HOUSE


FIGHTING WARRIOR
from MELBOURNE HOUSE



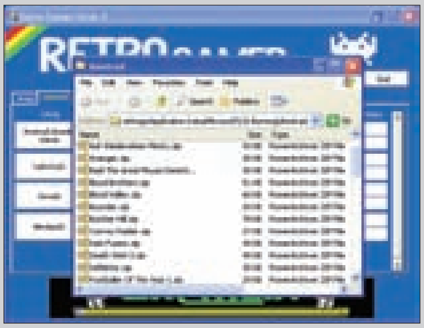
ocean
SOFTWARE PROJECTS
ULTIMATE PLAY THE GAME
U.S. GOLD
They sold a MILLION
They sold a MILLION
DALEY THOMPSON'S DECATHLON
Jet Set Willy
BEACH-HEAD
Hit SQUAD
The Best Group of "HITS" in Game History
1st NOVEMBER 1985 RELEASE DATE
NOW
ALL THESE BLOCKBUSTERS TOGETHER ON ONE
GIANT COMPILATION
SPECTRUM £9.95
AMSTRAD £9.95
COMMODORE 64 £9.95
DISC £14.95
COMMODORE and AMSTRAD
from...
Hit SQUAD

# Retro Gamer Coverdisc

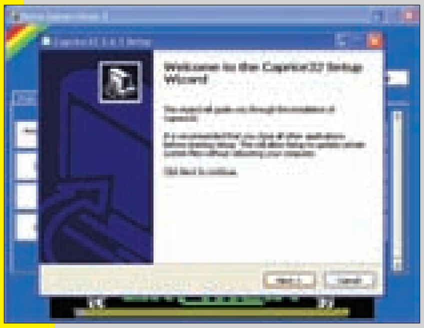
The Retro Gamer issue 3 coverdisc contains Gremlin's Greatest Hits – over 250 games from the classic software house, across seven different format. There's a selection of emulators, so you can play all of the games on your home PC, plus a bonus section containing adverts and inlays from many of Gremlin's most popular games. Enjoy!




**step 1** Place the coverdisc into your CD/DVD drive and it should auto-start. If not, select Run from the Start menu and enter D:\browser.exe (assuming that D: is the letter of your drive). When the browser appears, click OK to accept the declaration.



**step 2** Select a format using the browser tabs and then click on the Gremlin Games button. This will open a window containing a directory of all the games for that format. You can either copy the games to you Desktop or open them from the disc.



**step 3** You've got the games, but what about the emulators? Some of the emulators install straight from the disc, like Caprice32 in this example. Just follow the on-screen prompts and wait while the files are copied onto your hard drive.




**step 4** Many of the emulators are in .zip archives, so you may need an archive manager like WinZip to access them. You'll find WinZip under the Misc tab. Unzip all the files from the archive using the Extract feature, then run the executable file.

## Problem solving

If you're having a problem with a particular program on our coverdisc, please view the help file in the program for assistance. You might also consider visiting the website of the program author for further help. If this fails, please email: **techsupport@livepublishing.co.uk**.

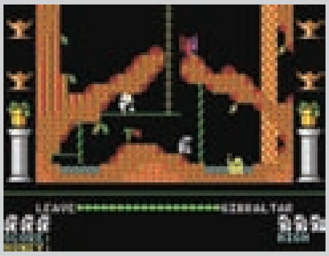
If you are having problems with the CD, first check that it is not dirty or scratched. CDs can be cleaned by holding them under the cold water tap and gently rubbing the silver side with a tissue. Dry it carefully with another tissue.

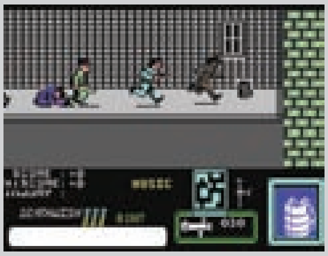
If the disc still doesn't work, then it may be faulty. Faulty discs should be returned to Retro Gamer, Live Publishing International Ltd, Europa House, Adlington Park, Macclesfield, Cheshire, UK, SK10 4NP. We will replace all genuinely faulty discs.

Coverdisc helpline
**01625 855051**
techsupport@livepublishing.co.uk
(Monday-Friday 10am-4pm)
**Helpline for coverdisc problems only**

## DISCLAIMER

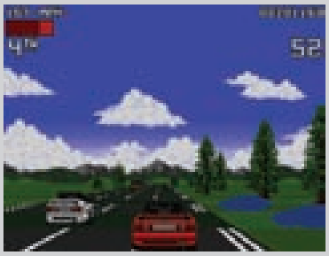
Some of the programs on the Retro Gamer disc interact with your PC on a fundamental level. We strongly advise you back up your personal data before using the disc. Due to the way the Retro Gamer disc is compiled, Retro Gamer, Live Publishing International Limited and/or any associated company and/or individual cannot take responsibility for damage to your PC or otherwise arising from use of the coverdisc. **You use the programs on the disc at your own risk.**

















## Amiga

Artura
Axel's Magic Hammer
Combo Racer
Deflektor
Disposable Hero
Footballer of the Year
Gary Lineker's Hot Shot
Harlequin
Hero Quest
Impossamole
John Lowe's Ultimate Darts
K240
Lotus Esprit Turbo Challenge
Lotus Turbo Challenge 2
Lotus Turbo Challenge 3
Mickey Mouse
Pegasus
Premier Manager 1
Premier Manager 2
Premier Manager 3
Shadow Fighter
Space Crusade 1
Space Crusade 2
Super Cars 2
Switchblade 2
Team Suzuki
Toyota Celica GT Rally
Utopia
Venus The Flytrap
Video Kid

## Amstrad

Auf Wiedersehen Monty
Avenger
Basil The Great Mouse Detective
Blood Brothers
Blood Valley
Bounder
Butcher Hill
Convoy Raider
Dark Fusion
Death Wish 3
Deflektor
Duct, The
Footballer Of The Year 1
Footballer Of The Year 2
Future Knight
Gary Lineker's Hotshot
Gary Lineker's Soccer Skills
Gary Lineker's Superstar Soccer
HATE
Hero Quest
Impossamole
Jack The Nipper 1
Jack The Nipper 2
Krakout
Lotus Esprit Turbo Challenge
Mask 1
Mask 2
Mask 3
Masters Of The Universe
Mickey Mouse
Monty On The Run
Motor Massacre
Nigel Mansell's World
Championship
Night Raider
Pink Panther
Samurai Trilogy
Shadow Of The Beast
Shoe People, The
Shove-a-Sledge
Skate Crazy
Snakes and Hazards
Space Crusade
Super Cars
Super Scramble Simulator
Switchblade
Techno Cop
Things Bounce Back
Tiddly Drinks
Toyota Celica GT Rally
Trailblazer
Way Of The Tiger

## Atari ST

Artura
Axel's Magic Hammer
Butcher Hill
Combo Racer
Deflektor
Federation Of Free Traders
Footballer Of The Year 2
Harlequin
HATE
Hero Quest
Impossamole
Lotus Esprit Turbo Challenge
Lotus Turbo Challenge 2
Lotus Turbo Challenge 3
Mickey Mouse
Mindbender
Nigel Mansell's World
Championship
Northstar
Plan 9 From Outer Space
Premier Manager 2
Premier Manager
Space Crusade 1
Space Crusade 2
Super Cars 1
Super Cars 2
Switchblade 1
Switchblade 2
Team Suzuki
Techno Cop
Toyota Celica GT Rally
Trailblazer
Utopia
Utopia The New Worlds
Venus Fly Trap
Video Kid

## BBC Micro

Footballer Of The Year
Krakout
Star Clash

## Commodore 16

Auf Wiedersehen Monty
Bounder
Dorks Dilemma
Footballer Of The Year
Future Knight
Gullwing Fulcon
Jetbrix
Jung Fu Kid
Magician's Curse, The
Monty On The Run
Petals Of Doom
Planet Search
Project Nova
Reach For The Sky
Rescue from Zylon
Sword Of Destiny
Trailblazer
Tube Runner
Tycoon Tex
Way Of The Tiger
Wimbledon
Xargon Wars
Xargon's Revenge
Xcellor8

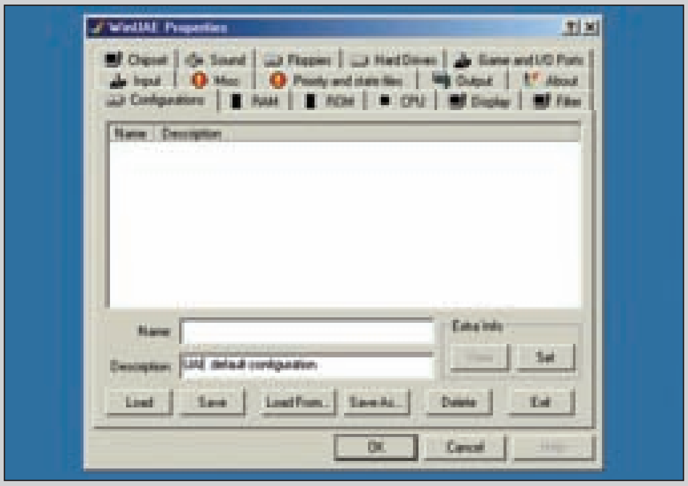
## Commodore 64

Artura
Auf Wiedersehen Monty
Avenger
Basil The Great Mouse Detective
Blood Valley
Bounder
Bulldog
Butcher Hill
Convoy Raider
Dark Fusion
Death Wish 3
Deflektor
Footballer Of The Year 1
Footballer Of The Year 2
Future Knight
Greg Norman's Ultimate Golf
HATE
Hercules Slayer Of The Damned
Hero Quest
Impossamole
Jack The Nipper 1
Jack The Nipper 2
John Lowe's Ultimate Darts
Krakout
Lotus Esprit Turbo Challenge
Mask 1
Mask 2
Mask 3
Masters Of The Universe
Metabolis
Mickey Mouse
Monty On The Run
Motor Massacre
North Star
Potty Pigeon
Rebounder
Roy Of The Rovers
Samurai Trilogy
Skate Crazy
Space Crusade
Sports-a-Roni
Suicide Express
Super Cars
Super Sports
Switchblade
Techno Cop
Things Bounces Back
Thing On A Spring
Trailblazer 1
Trailblazer 2
Vampire's Empire
Wanted Monty Mole
Way Of The Tiger
West Bank

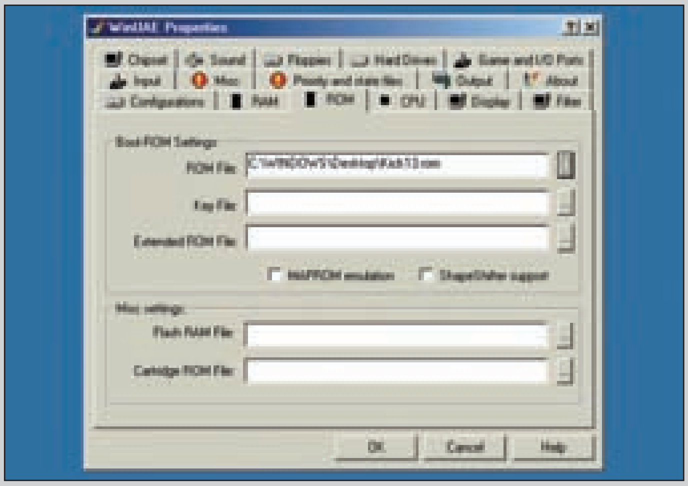
## Spectrum

Alien Evolution
Alternative World Games
Artura
Auf Wiedersehen Monty
Avenger
Basil The Great Mouse Detective
Blood Brothers
Blood Valley
Bounder
Butcher Hill
Convoy Raider
Dark Fusion
Death Wish 3
Deflektor
Duct, The
Final Matrix, The
Footballer Of The Year 1
Footballer Of The Year 2
Future Knight
Gary Lineker's Superskills
Gary Lineker's Superstar Soccer
Grumpy Gumphrey Supersleuth
HATE
Hercules Slayer Of The Damned
Hero Quest 1
Hero Quest 2
Impossamole
Jack The Nipper 1
Jack The Nipper 2
Krakout
Lotus Esprit Turbo Challenge
Mask 1
Mask 2
Mask 3
Maters Of The Universe
Metabolis
Mickey Mouse
Monty Is Innocent
Monty On The Run
Motor Massacre
Muncher, The
Nigel Mansell's World
Championship
Night Raider
North Star
Pink Panther
Potty Pigeon
Rocky
Roy Of The Rovers
Sam Stoat Safebreaker
Samurai Trilogy
Shadow Of The Beast
Shoe People, The
Skate Crazy
Snakes and Hazards
Space Crusade
Super Cars
Super Scrambler Simulator
Super Sports
Switchblade
Techno Cop
Things Bounces Back
Tinder Box
Tour De Force
Toyota Celica GT Rally
Trailblazer
Vampire's Empire
Wanted Monty Mole
Way Of The Tiger
West Bank

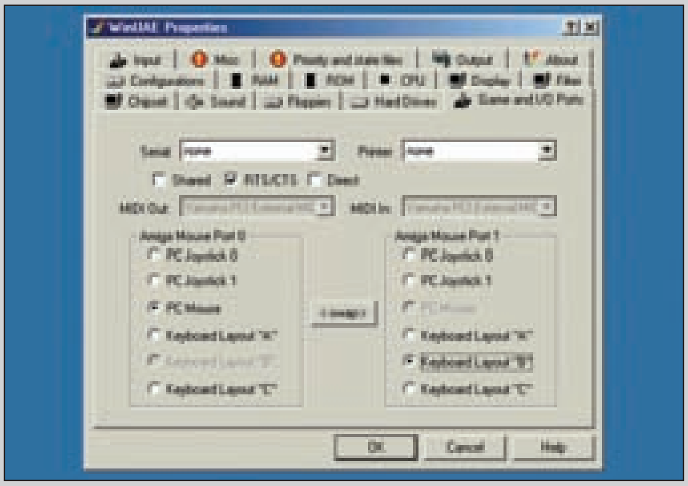
## Emulate the Amiga (using WinUAE)



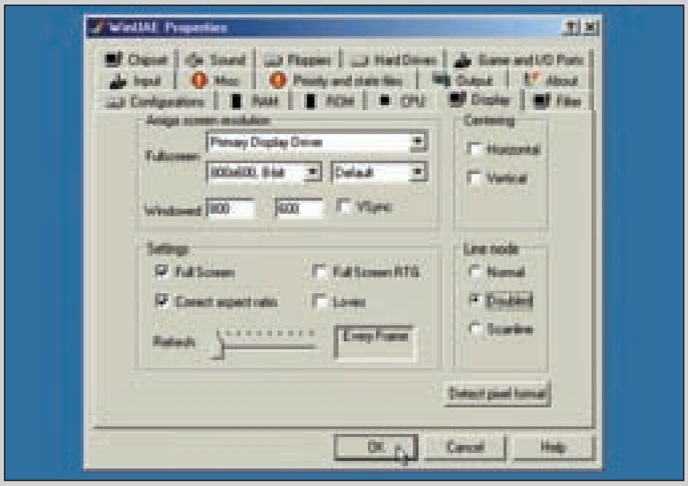
**step 1** Begin by installing WinUAE. Before you can use the program you need an Amiga Kickstart ROM file. Due to copyright reasons this cannot be included on the coverdisc. You can either grab the file from an original Amiga Workbench disk or take the easy option and search the Internet for one.



**step 2** Click the ROM tab and create a link to your Kickstart ROM file (the file Kick13.rom will emulate the A500's Workbench 1.3 and Kick30.rom will emulate the A1200's Workbench 3.0). Now click the Floppies tab. In the box marked DF0 browse for an Amiga Disk File (usually .adf).

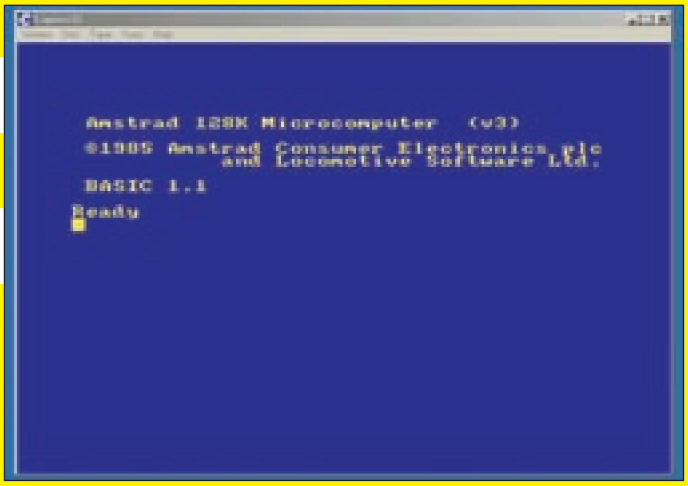


**step 3** Select your control method by clicking the Game and I/O Ports tab. We recommend that you opt for PC Mouse in Amiga Mouse Port 0 and PC Joystick in Amiga Mouse Port 1. If you do not own a game controller select Keyboard Layout B. This setting lets you emulate a joystick using the cursor keys and left Ctrl to fire.

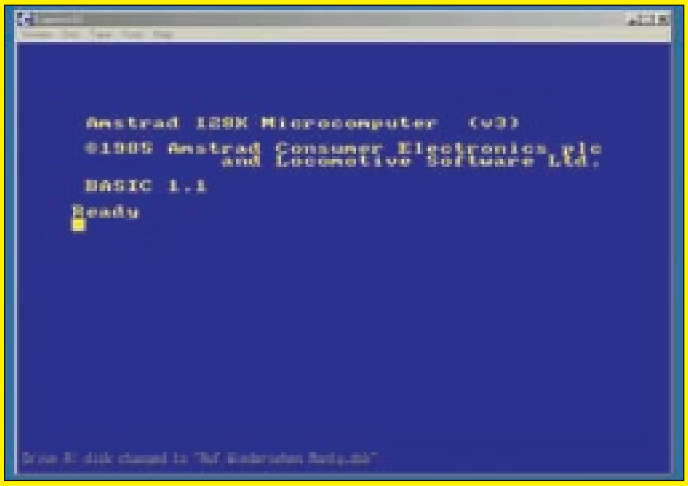


**step 4** Click the Display tab and tick the Correct Aspect Radio and Full-Screen options. Finally, check the Doubled option under Line mode and click OK. After a brief pause the game will load. During play you can pause emulation and return to the program menu at any time by pressing F12.

## Emulate the Amstrad (using Caprice32)

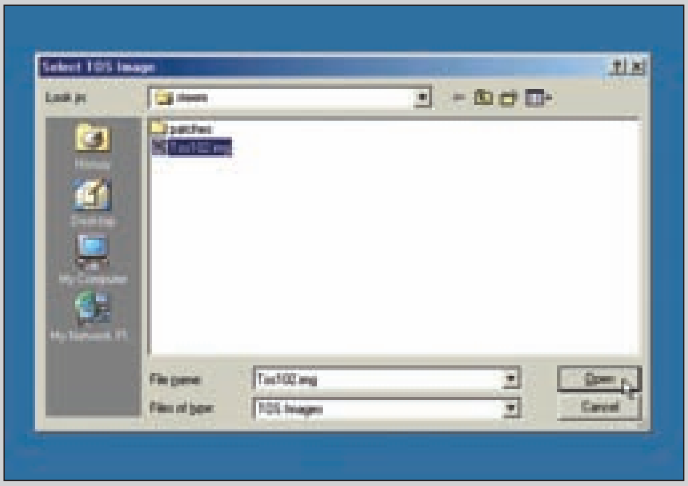



**step 1** Install Caprice32 from the coverdisc. For ease of use, select to place shortcuts in the Start menu and on the Desktop. When the files have been copied across to your PC, the familiar Amstrad BASIC screen will be displayed.

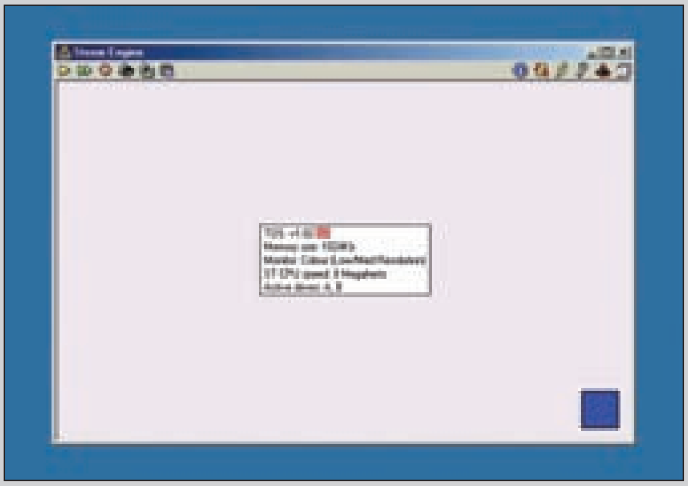



**step 2** The Amstrad games on the coverdisc are in the .dsk format. Theres's no need to unzip the files first – just drag and drop the archive into the Caprice32 window. A conformation message will be displayed at the bottom of the screen.

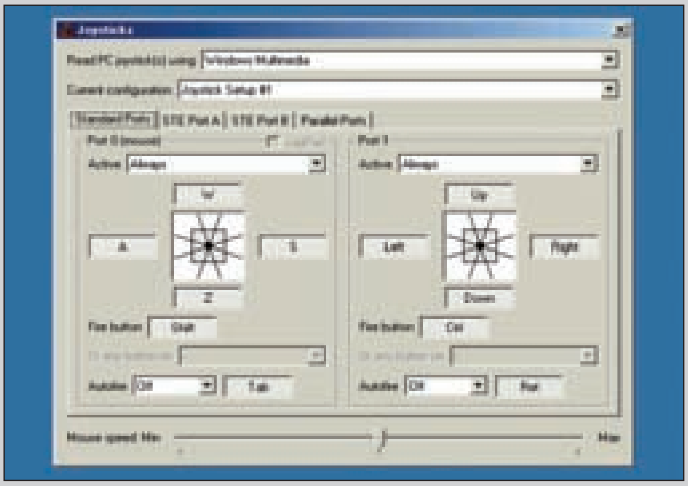
## Emulate the Atari ST (using Steem)




**step 1** Unzip the Steem archive to an empty folder on your desktop and run the Steem.exe file. When promted, open the TOS image file (you'll find it in the same folder as the Steem executable – it's named Tos102.img). You can ignore the other options for now – just click Cancel.



**step 2** The main Steem screen will now be displayed. The emulator is very easy to use – indeed if you drag and drop an Atari ST game into the Steem window (there's no need to unzip it first), the game will autorun. It should only take a few seconds to load.




**step 3** To change the control options, click the small joystick icon in the top right-hand corner. By default, Port 1 is mapped to your PC keyboard's cursor keys, with right Ctrl as fire. We recommend you change the Active options on both Ports to Always.




**step 4** You can switch to full screen mode at any time by pressing Alt and Enter. When in full screen mode, press the Pause/Break key to display the menu bar. Pause/Break also toggles the PC mouse on and off when in windowed mode.

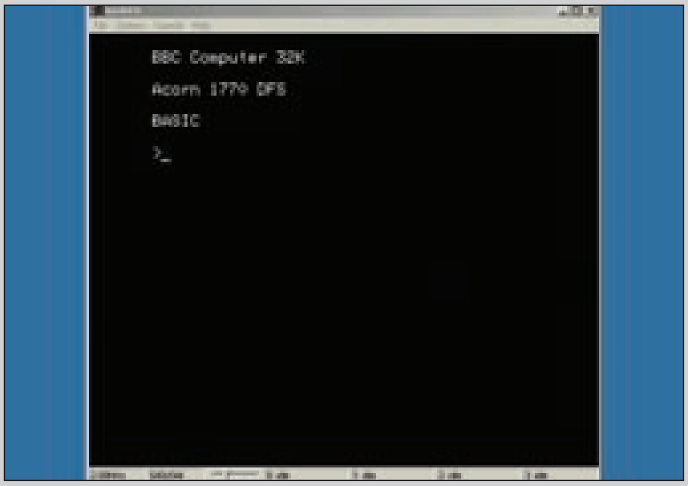



**step 3** To run the game, type in CAT and press the Enter key to display the contents of the disk. You'll notice that one of the files ends with the .BAS extension – you need to load this file. So, using the example in the screenshot, type in LOAD "AUFMONTY" and press the Enter key.

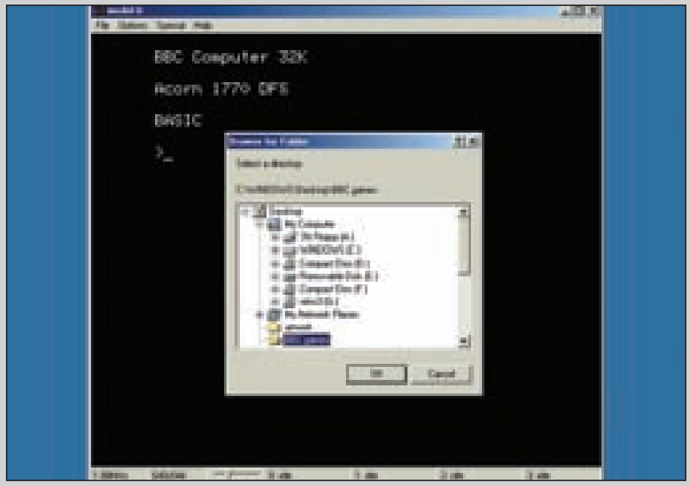



**step 4** Finally type RUN and press Enter. The game will now load. If you would like to speed the emulation up, press F8 and move the CPC Speed slider under the General tab. When you have changed the setting, click OK to return to the game.

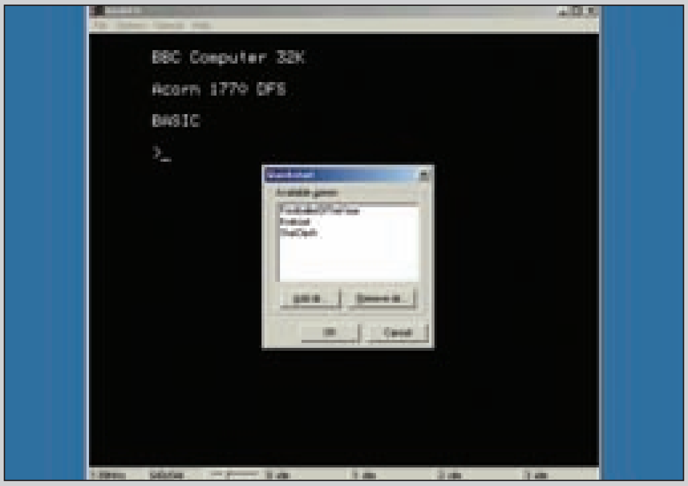
## Emulate the BBC Micro (using Model B)




**step 1** Unzip the Model B archive into an empty folder on your Desktop and run the modelb.exe file. After a brief pause, the BBC BASIC screen will appear. You can manually resize the window or select Options/ Resolution and choose one of the pre-defined resolutions.




**step 2** The easiest way to use Model B is to first place your BBC games in a new folder (you will need to unzip them first). Then select File/ Quickstart and click the Add Dir button. Browse to the folder containing the games and they will be listed in the Quickstart window.

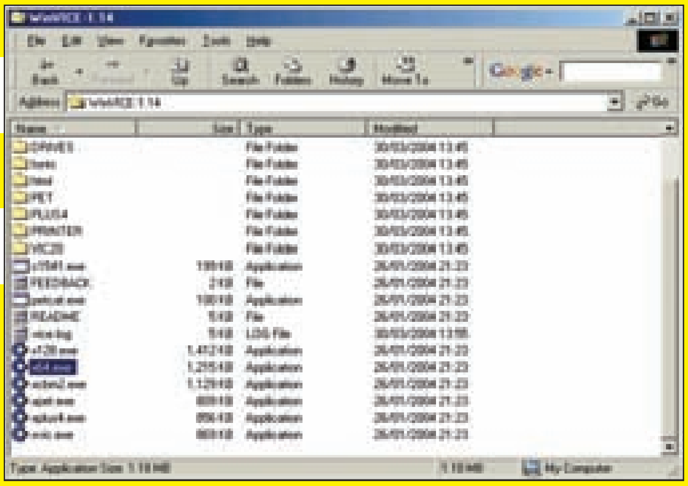



**step 3** Select a game from the list and click OK to load it up. To view the game in full screen mode, simply select Options/ Full screen. To return back to windowed mode, right-click anywhere on the screen and again select Options/ Full screen.

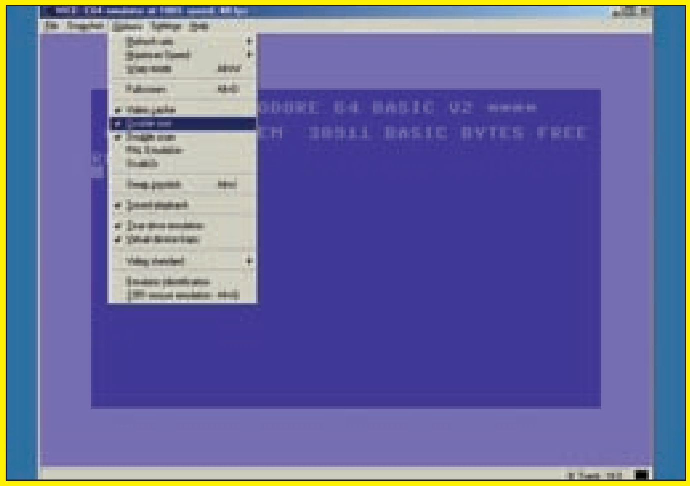



**step 4** When in full screen mode you'll notice the authentic scanlines. To remove these, right-click anywhere on the screen and select Options/ Full screen scanlines. Choose the Double setting and the scanlines will disappear.

## Emulate the Commodore 16/64 (using WinVICE)

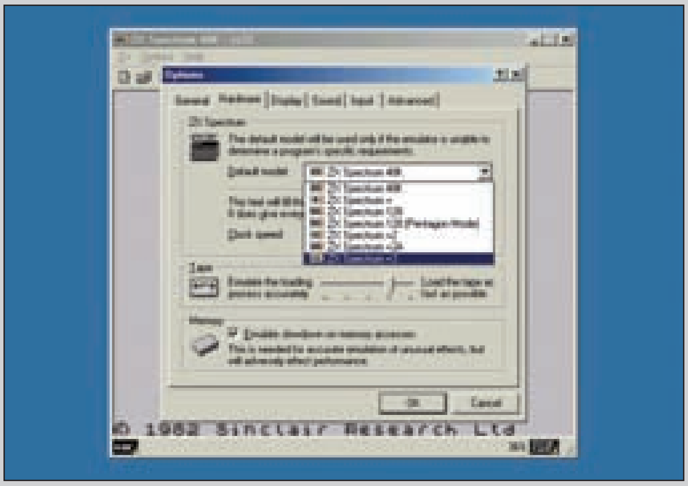


**step 1** Unzip the WinVICE archive into an empty folder on your desktop. The folder contains executable files for several Commodore machines. To emulate the Commodore 16, double-click xplus4.exe. To emulate the Commodore 64, double-click x64.exe.

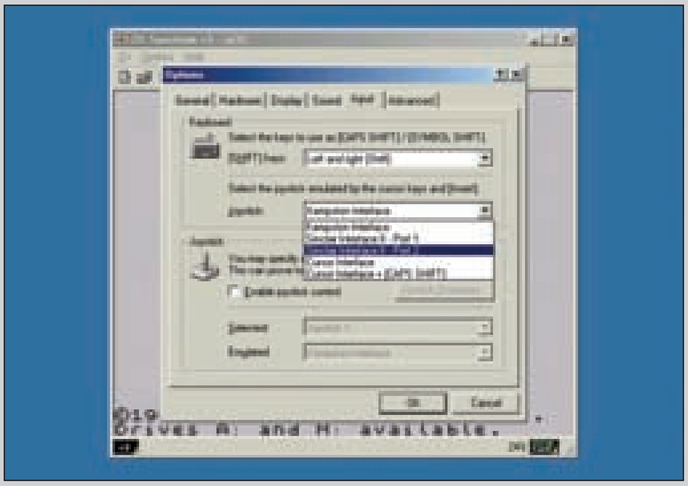


**step 2** The Commodore BASIC screen will appear in a window. To run the emulator full-screen, first select Double Size from the Options menu. You can now toggle full-screen mode on and off by pressing Alt+D. To remove the scanlines click Options/ Double Scan.

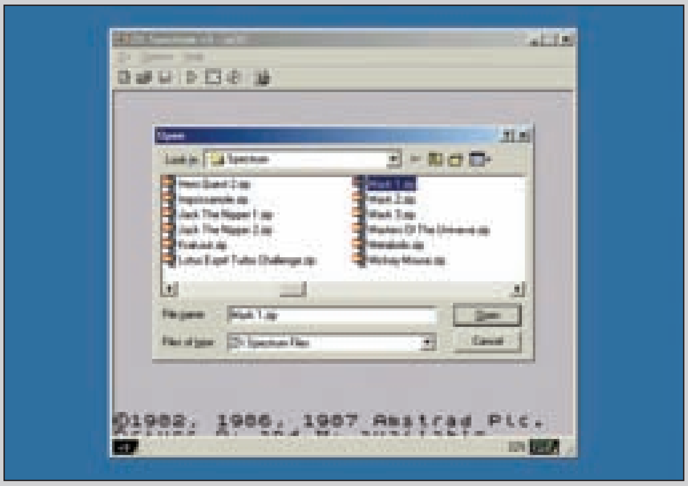
## Emulate the Spectrum (using ZX32)



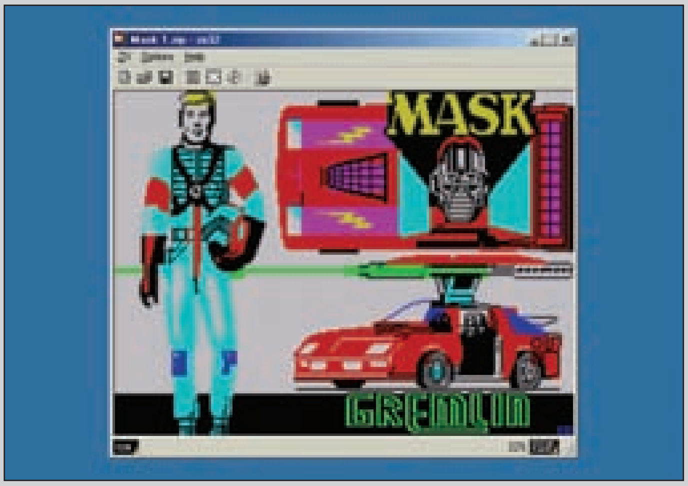

**step 1** Run ZX32 from the coverdisc. Press F9, select the Hardware tab and choose a machine from the Default Model menu. Most games will run on the ZX Spectrum +3 but if you have any problems (usually with older games) select the ZX Spectrum 48K model. Now click OK and press F5 to reset the emulator.



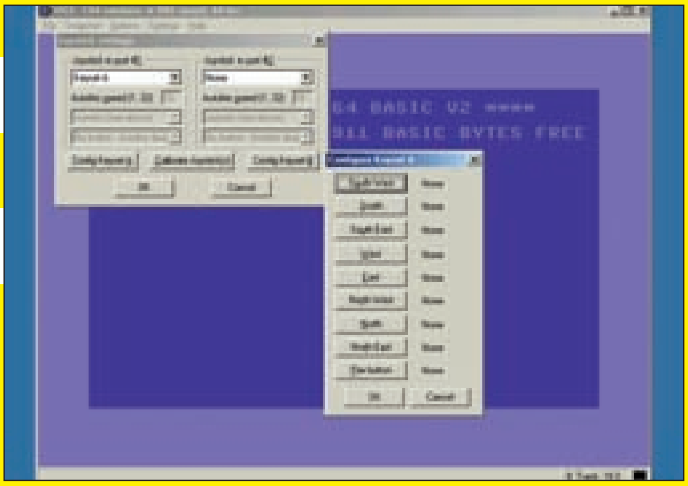

**step 2** Return to the Options dialog (F9) and select the Input tab. Here you can choose which joystick will be emulated using your PC cursor keys (and 0 to fire). Most Spectrum games supported Kempston Interface and Sinclair Interface so select either of these. Click OK when finished.



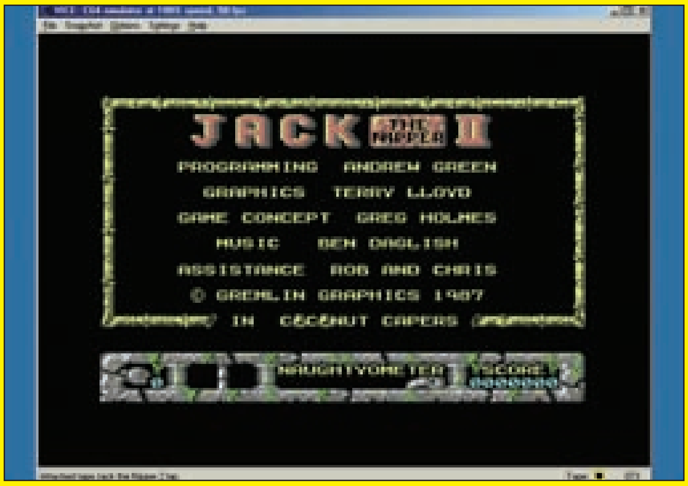

**step 3** You are now ready to load a program into the emulator. Select Open from the ZX menu and search for Spectrum file types (.z80, .sna, .tap and .tzx files are supported by the emulator). Zip files are supported too so there is no need to extract files from archives before running them.




**step 4** Click Open to load the game. To toggle between windowed and full screen mode press F4. For a clearer full screen display, you can remove the scanlines by pressing F9 and selecting the Display tab. Now change the Screen Drawing option to Normal. Finally, to toggle pause mode on and off press F3.



**step 3** If you have a PC Joystick you can use it with WinVICE. Click Settings/ Joystick Setting and select PC Joystick from the drop down menu. Alternatively you can emulate an original Commodore joystick using your PC keyboard by selecting Keyset A and then pressing Config Keyset A.

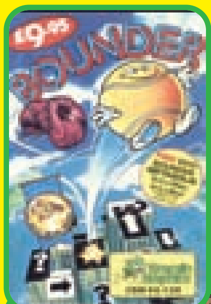


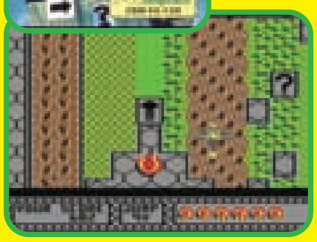

**step 4** The games on the coverdisc are a mixture of tape and disk images. To load either type, select Autostart Disk/Tape Image from the File menu and select a file. To speed up loading times, switch to Warp mode by pressing Alt+W.



# TEN OF THE BEST

## Here's our selection of the very best Gremlin games

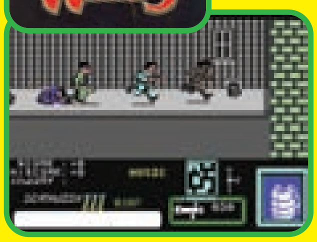


### Bounder (1986)

Bounder seems like a strange idea for a game at first, but after playing it for a while, you'll soon see the immense appeal behind it. Imagine Trailblazer from a top down view, throw in a few enemies and extra obstacles and there you have it – Bounder-tastic! As the tennis ball star of the show, it was your job to bounce from pathway to pathway, avoiding enemies, making the most of extra power-ups (such as improved jump distance), and generally avoiding a long fall to your doom. The end result was a great game that offered a long-term challenge and added a new dimension to the similar Trailblazer. Bounder was a difficult game, and you'll need patience to get the most out of it. Remember one rule – if it's not grey, avoid it! Re-Bounder, The Commodore 64 sequel, is also well worth playing.



### Death Wish 3 (1986)

This story of vigilante justice gets our vote as the most violent 8-bit videogame ever made! Based around the film's explosive conclusion, in which Paul Kersey (Charles Bronson) literally goes ape-shit in the streets of New York, blasting away bad guys in a bid to avenge the slaughter of a friend. The film was completely over the top, and the game was even more so, providing the player with shotguns, machine guns and rocket launchers. However, the game's main appeal lied in its gory graphics. When shot, street punks melted into a pile of blood and bone, much to the delight of adolescent players. In a nice touch, medics would then run on-screen and drag the pile of body parts away!

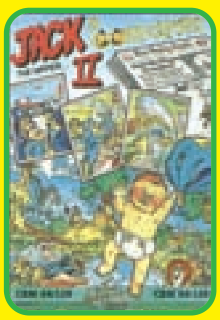


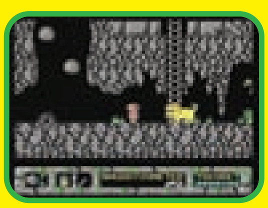




### Deflektor (1988)

To make a great game many think you need a complex plot, amazing envelope–pushing visuals, intricate game engines and a booming soundtrack. However, sometimes you can ditch all this and go for the plain old addictive route instead. Deflektor took just that route, and by taking an ages-old puzzle as its base, it delivered some superb gaming goodness. The aim was simple – to guide the laser beam to its destination by using an array of rotating mirrors and other special blocks, taking care not to overload the laser generator. You also had to destroy spheres on the way, adding even more to the deviousness of the puzzles. Deflektor was addictive, challenging and perhaps the perfect example of a puzzle game.



### Jack the Nipper II (1987)

The original Jack the Nipper was a fun puzzle game in which you had to create as much chaos as possible. The sequel, which followed a year later, took a different tack. There were still opportunities for dastardly deeds, but the emphasis was now on exploring the game's huge jungle setting. The back story revealed that Jack and his family had been deported to Australia after the events in the first game, but mid-journey the little nipper bailed out, using his nappy as a parachute. Landing in the jungle, Jack had to escape his furious father, while avoiding the local wildlife. He could even go for a ride in a mine cart! The Spectrum and Amstrad versions were similar, flip-screen affairs, but they were both surpassed by the classy Commodore 64 version. Lots of fun.

## Lotus Turbo Challenge II (1991)



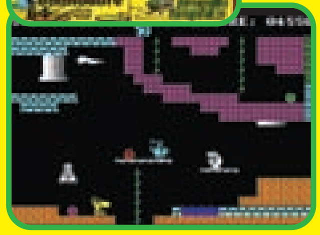

There surely wasn't a single person who wasn't impressed when they clapped eyes on this stunning sequel. Lotus Turbo Challenge II was total class from the minute you picked it up to the second you screeched across the finish line. Controlling your Lotus convertible over the many, varied courses was a joy, and battling against the elements, such as night time city runs or navigating through dense fog, was a great gaming experience. The challenge was steep, but never impossible, and should you tire of the single player, you could go head to head with a friend via split screen.



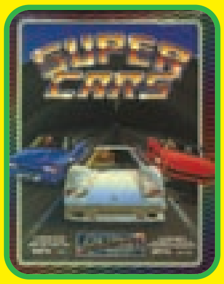
## Monty on the Run (1985)



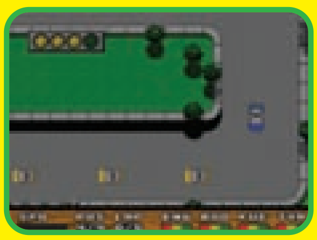

Following the frankly disappointing Monty is Innocent, Monty on the Run returned to the roots of the original game, and took the series, and indeed the whole platforming genre, to new heights. In his bid for freedom, Monty had to negotiate room after room of increasingly bizarre challenges and weird enemies. It was tough – some would say a little too tough, especially as you had to select the correct survival kit at the beginning – but it certainly wasn't impossible. And any frustration was suppressed somewhat by the game's refreshing sense of humour. All of the 8-bit versions are similar, although the C64 versions stands out, thanks to Ron Hubbard's foot-tapping tunes.



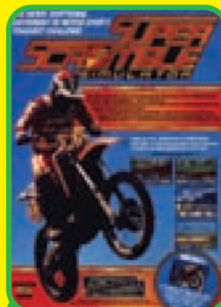
## Super Cars (1991)



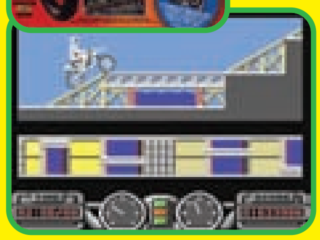

Fans of the classic racer Super Sprint were treated to an excellent addition to the genre when Super Cars by Magnetic Fields arrived on the scene. Taking the devilishly simple game-play found in the top-down rubber burning mould, Super Cars infused the mix with a career mode that opened up a whole new spin on things. As you progressed through the races, you could earn more money in order to buy bigger and better cars. Races were challenging and the track was usually strewn with all sorts of fender bending obstacles and reaction testing bends. Gathering enough money together to buy that new car was a thrill, and blasting an opponent with your shiny new missile launcher was top notch. Super Cars II was also a great game, but the original took pole position.



## Super Scramble Simulator (1989)



Both Wheelie and Kikstart were extremely popular, so it's surprising how few motorbike stunt-riding games there were. Super Scramble Simulator is an excellent example of such a game, although it failed to tear up the charts, making it something of a missed gem. Released on the Spectrum, Commodore and Amstrad, the game saw you negotiating a series of tricky, off-road courses on your scrambler. But it offered much more than a series of stunts and jumps, as you had to carefully control your speed using your gears. Hit a jump too fast and you'd fall. Climb a hill in a high gear and you'd stall. The title was certainly apt.



## Trailblazer (1989)




This amazingly difficult ball game is as original and as addictive as the day it was made, and unsurprisingly has been cloned time and time again. It had no ground breaking visuals and remained simple to the very end, but controlling your ever rolling football along the devilish and perilous tracks never let up on the brain. By avoiding pitfalls and jumping over obstacles, you had to roll your way to the end of each course. The tracks were filled with various different coloured squares – some of these caused your ball to bounce into the air, and some gave you a speed boost. Add in the split screen two-player mode and you had a classic that has endured the years.



## Videokid (1992)



The late 80s and 90s were chock full of platform games, and much like FPS titles today, they started to get a little stale after a while, and titles needed something extra if they were to succeed. VideoKid tried this, and took the novel approach of the main character being able to actually enter different films. This led to varied settings for levels, such as western, black and white, and horror. The cartoony graphics were great, and the backgrounds of each level portrayed their respective themes perfectly, in a comedy way of course. VideoKid wasn't exactly ground breaking in the gameplay department, but with some perseverance, it was, and still is, a very enjoyable game.



eMag

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- ☐ ATARI FOR SALE
- ☐ ATARI WANTED
- ☐ NINTENDO FOR SALE
- ☐ NINTENDO WANTED
- ☐ SEGA FOR SALE
- ☐ SEGA WANTED
- ☐ OTHER FOR SALE
- ☐ OTHER WANTED
- ☐ RETRO GAMING CLUBS
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C Visit our website at: **www.livepublishing.co.uk** and complete the form online

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**Hot Rasputin** – Rare boxed game tape for Spectrum 48K. In near mint condition (no manual as never came with one) £10. **Tel 01954 211452**

**Spectrum 128K** plus all leads, cassette recorder, and 100s of games. Also ZX81 plus 16K RAMpack. Offers **01362 694793**

**Way of the Exploding Fist** (Melbourne House) for Spectrum. Boxed with instructions, good condition, £2. **Tel 07763 191168**

## SINCLAIR WANTED

**Spectrum games wanted** – Boxed with instructions. Email list and prices to **iainanderson@europe.com**

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## COMMODORE FOR SALE

**Commodore Scene** – Tired of loading from tape? Discover the alternatives, such as Hard Drives, RAM Drives and 20MHz CPU accelerators. The Commodore scene importing service brings you the latest in new and used hardware and software for all your commodore 64/128 needs. Contact for details & free sample (quote RG2) **www.commodorescene.org.uk**

**Commodore 64 SCART cables** – Get clearer picture, best quality cables, fits most variants of C64. Only £8 +£1 postage. **07713 630087 or jp.hayward@virgin.net**

**Hunchback by Ocean for C64** – Boxed with instructions, pretty good condition, £2.50. **Tel 07763 191168**

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**Commodore game consoles,** 1,000K, 3,000H, Chessmaster, C64GS (mint), CD32 original pack boxed, FMV module (boxed), CD32 spectacular voyage pack, plus one more CD32 Terminator pack. **Oxford 01865 775556**

**Amiga 1940 Monitor,** A1200 with HDD (boxed), A500 1.3 boxed mint condition, C128D (plastic) and C128 (metal) calculator collection (Commodore – 100+), Amiga A2500 (boxed) with dodgy floppy but mint otherwise. **Tel 01865 775556**

**Commodore 264 machines,** Plus 4, C16 (with internal upgrade), 116 (boxed), 3 x joysticks, cartridges, 1531 cassette decks (2), 1551 disk drives (2), Hungarian import pd demos etc, C62 power demos. **01865 775556**

**Amiga A1000 (unboxed),** extra RAM upgrade (A1050?) boxed, A1010 disk drive, square 1084 monitor, Pet 4040 dual disk drive with manual lead, CDTV with keyboard mouse leads, demo CDs. **Oxford 01865 775556**

**Commodore CDTV,** black 10845-D2 monitor, trackball, SCSI Interface (internal), ROMswitch, 120+ Orinal CDTV titles, 1/R mouse (boxed), T-shirt, NTSC VHS Promo, External HDD, interface, leads etc, many extras. **Tel 01865 7755556**

**Commodore KIM-1** MOS technology MCS 6500 instruction set summary manual card (official), Web-it laptop (post Commodore), Escom 486 laptop kit with carry case, CBM 202 Adding machine (rare). **Oxford 01865 775556**

## COMMODORE WANTED

**Final three issues of Commodore Format magazine** – Will pay £5 per issue. **lee.theasby@ntlworld.com**

**Commodore Plus 4** computer in fully working order, preferably with games. **lee.theasby@ntlworld.com**

**Issues of Commodore Force magazine** – Will pay £6 with tape, £5 without. **retro@snowblind.net**

**Wanted for Amiga 500** – Any Dizzy game, ie Treasure Island Dizzy, cash paid. **Tel Joe 01229 431770**

## ATARI FOR SALE

**Atari XL/XE SCART cables** – Get clearer picture, best quality cables, fits most Atari 8-bit systems, only £8 +£1 postage. **07713 630087 or jp.hayward@virgin.net**

**Wood-effect Atari VCS 2600** plus all leads, joysticks and paddles, and over 50 games. Offers please **01362 694793**

**Free Namco 5-in-1 Arcade Classics Console** when you subscribe to Retro Gamer (includes Pacman, Galaxians, Bosconian, Rally-X and Did Dug) **– See page 100 for details**

Bump N Jump (US Import) for Atari 2600 VCS, boxed with instructions, good condition, £4. **07763 191168**

**Atari VCS Wood-Fronted console** – With joysticks, paddles, and six games. £100. **retrobloke@aol.com**

## ATARI WANTED

**Atari Jaguar and Atari Lynx plus games.** Must be in fully working order. **lee.theasby@ntlworld.com**

## NINTENDO FOR SALE

**N64** + best rare games, £200. **Tel 07815 906410**

**Nintendo 64** – 2 controllers, 2 memory cards, 10 boxed games, £50. **Tel 0161 6811854 or 07818 414473**

**Nintendo 64 games** – Super Mario 64, Zelda, GoldenEye, The World is Not Enough, Turok 3, Operation Winback, £9 each. **0161 2238754**

**Nintendo Famicom, Antarctic adventure by Konami – Boxed, complete. £25. Picture available. retrobloke@aol.com**

**Family Trainer 5 for Nintendo Famicom** – For trainer mat only. Very rare, boxed complete. £25. Picture available. **retrobloke@aol.com**

**Final Fantasy by Squaresoft for Nintendo Famicom** – Boxed, in very good condition, but without instructions. £50. Picture available. **retrobloke@aol.com**

**Hello Kitty World for Nintendo Famicom** – Boxed, complete, rare game. £40. Picture available. **retrobloke@aol.com**

**Nintendo Famicom Disk System** – Boxed, complete and recently serviced by Nintendo of Japan. In excellent condition. £200. Pictures available. **retrobloke@aol.com**

**Sharp Famicom Twin, Nintendo Famicom with built in disk drive** – Rare system in excellent condition. £250. Pictures available. **retrobloke@aol.com**

## NINTENDO WANTED

**NES console** in fully working order, plus games. **lee.theasby@ntlworld.com**

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**Boxed and complete Sega GameGear TV Tuner available for trade.** I will swap it for boxed and complete Sega Saturn or Dreamcast games. Mail me your offers! **mdixony2k@hotmail.com**

**Boxed and complete multi-region 'Hong Kong' Mega Drive available for trade.** Plays all Jap, US and UK games. Will trade for boxed, complete Sega Saturn and Dreamcast games. Mail me your offers! **mdixony2k@hotmail.com**

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**McDonalds Treasureland Adventure** (by Treasure) for sale. Mega Drive import. Boxed with instructions, very good condition. £25. **Tel 07763 191169**

**Golden Axe 3 for sale.** – Mega Drive import, boxed with instructions, excellent condition. £27. **Tel 07763 191169**

**Sega 32X expansion system for Mega Drive.** Allows you to play special 32X range or 32-bit games. Complete with all cables/PSU and fully tested. VG condition, with box (no polys). £80. **retrobloke@aol.com**

## SEGA WANTED

**Tails' Sky Patrol for Sega GameGear.** Must be working. Would pay £40-£140 depending on condition. **07958 546297**

**Sega Saturn,** including Sega Ages volume 1. **Tel 01782 330120, Staffordshire area**

## OTHER FOR SALE

**If you need Retro** and nobody else can help, then you should try **www.retro-trader.com.** Retro games, consoles, computers, toys, films, collectables, cartoons, software, handheld games, carts, books, magazines, too many brands to mention, information, and links. And with our new online shop opening soon you would be mad not to look! **Email us on info@retro-trader.com**

**Free Namco 5-in-1 Arcade Classics Console** when you subscribe to Retro Gamer (includes Pacman, Galaxians, Bosconian, Rally-X and Did Dug) – **See page 100 for details**

**Vectrex** – Not boxed, 4 games, £120. SNES Games – Cannon Fodder, Goof Troop, Pinball, Pilot Wings, Firepower, Stunt Racer, all boxed, £25 each. 20 unboxed games, £100. **Wanted** – Game and Watch. **Tel 07960 964322 anytime**

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**Acorn Electron** – Boxed, complete, in excellent condition. Box shows some wear, but machine is fantastic. Includes cables and manuals. £80. Pictures available. **retrobloke@aol.com**

**Philips CDI machine** – With additional video cartridge, allowing VCD playback. In fully working order and very good condition. Complete with power cable and remote control. Includes RF and AV outputs. £90. Pictures available. **retrobloke@aol.com**

**Dragonquest V and Dragonquest VI for Super Famicom.** Boxed, complete. £35 each. Picture available. **retrobloke@aol.com**

**Sailor Moon for Super Famicom.** Just cart, but in very good condition. £30. Picture available. **retrobloke@aol.com**

**Super Street Fighter 2 for Super Famicom.** Just cart, in very good condition. £25. Picture available. **retrobloke@aol.com**

**Ninja Ryukended by Tecmo,** early Ninja Gaiden game. Boxed, complete. £30. Picture available. **retrobloke@aol.com**

**Retro Collectables Bristol – Classic consoles and games for sale.** Mail order specialist for Super Nintendo, Sega Mega Drive, Segza Master System, Nintendo NES, Atari 2600, Sega Saturn, peripherals, spare controllers. 1,000s of games stocked. **Tel 0117 9044070**

## OTHER WANTED

**Instant cash for your stations** – We will give you the best price for your consoles and games. **Collection within Manchester area. Eccles Electric, 66-68 Liverpool Road, Eccles, M30 0WA. Mon-Sun 9.00am-5.30pm**

## RETRO GAMING CLUBS

**Classic Gaming Expo** – July 24th and 25th at the Fairfield Entertainment Centre, Croyden. **All enquiries to Chris on 07793 061423**

**Visit Lee's PeeknPoke, classic gaming website.** News and review website for the retro gamer in us all. Fun and friendly site for your C64, Spectrum, arcade and Atari needs. **http://peeknpoke.emuunlim.com**

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## ANYTHING ELSE RETRO FOR SALE

**Official Midway/Coleco Pac-Man mini tabletop (1981)** – Good condition, boxed and instructions. Box is tatty and worn, but intact! A rare item to find! **07950 616149**

**Official Sega rotating racks (lockable) for Mega Drive (2),** counters (2), slatboard sheets cut and uncut (20), hooks for slatboard (500-1,000), 1,000 new cases (for cassette games), shelves (50+), large 5x4 metre stand for TVs, retro etc, coffee, soup, tea machine. **01865 775556**

**Vectrex** – Not boxed, 4 games, £120. SNES Games – Cannon Fodder, Goof Troop, Pinball, Pilot Wings, Firepower, Stunt Racer, all boxed, £25 each. 20 unboxed games, £100. **Wanted** – Game And Watch. **Tel 07960 964322 anytime**

**MB Super Simon** – Boxed, in excellent condition. Classic 1970s' party game. £70. **Contact retrobloke@aol.com for pictures and info**

**Retro Collectables Bristol – Classic consoles and games for sale.** Mail order specialist for Super Nintendo, Sega Mega Drive, Sega Master System, Nintendo NES, Atari 2600, Sega Saturn, peripherals, spare controllers. 1,000s of games stocked. **Tel 0117 9044070**

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**Issue 1 of Retro Gamer wanted** – Willing to pay good price for a perfect copy with CD. **pjkarn@hotmail.com**

**Issue 1 of Retro Gamer** – Must be in excellent/new condition including coverdisc. Cash waiting for seller. **Tel 07712 784607**

**Neo Geo AES carts** – cheap. **jsr_games@hotmail.com**

**Sam Coupé games –** Defenders of the Earth, Prince of Persia, Football Director, Sam Multipack 1, Pipemania, Klaxx(?) and any other rare games. **chubberman@hotmail.com**

**The Simpson's arcade machine control panel overlay** for English 4 player cabinet. **jsr_games@hotmail.com**

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## MERCHANDISE FOR SALE

**Atari playing cards featuring RealSports Football.** A true collector's item. Given to distributors only. Mint, Sealed. Picture available. **retrobloke@aol.com**

**Official Nintendo inflatable banana** – Used to promote Walls' Donkey Kong ice creams. A rare collectible. £15. Picture available. **retrobloke@aol.com**

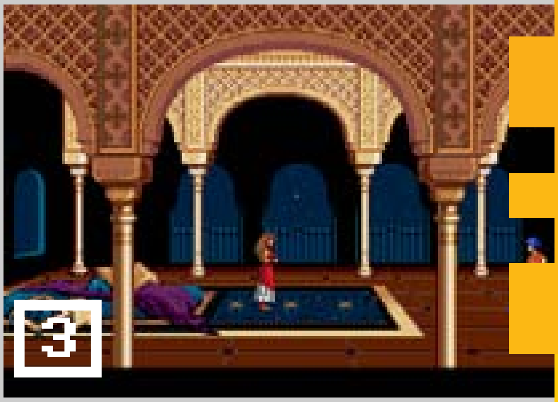
eMag




In this issue, we look at the classic end scene from Prince of Persia on the Sega Megadrive




# Endgame







[1] You reach level 10 well within the 60-minute time limit and approach the evil Jaffar. Swords are drawn and a deadly duel takes place high above an almost bottomless pit. The block move, seldom used before this final battle, proves vital as Jaffar launches attack after attack, trying to push you into the pit. But ultimately, your defensive skills reap rewards as deft counter-attacks sap Jaffar's strength. A final killer thrust is delivered and the tyrant drops.

[2] The door over on the left swings open, leading you into Jaffar's private quarters. Inside stands the Princess [3] and in an end scene straight from a classic movie, the two characters embrace [4]. The Princess is free, her people have been saved from slavery, and everyone hails the Prince of Persia [5&6].

